THE STATUS OF THE FEDERAL GOVERNMENT'S MANAGEMENT OF WOLVES

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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CONTENTS

OVERSIGHT HEARING ON THE STATUS OF THE FEDERAL GOVERNMENT'S MANAGEMENT OF WOLVES

Wednesday, September 21, 2016

U.S. House of Representatives

Subcommittee on Oversight and Investigations

Committee on Natural Resources

Washington, DC

The subcommittee met, pursuant to notice, at 3:12 p.m., in room 1334, Longworth House Office Building, Hon. Louie Gohmert [Chairman of the Subcommittee] presiding.

Present: Representatives Gohmert, Labrador, Westerman, Radewagen, Bishop; Dingell, Huffman, Polis, and Grijalva.

Also present: Senator Tillis, and Representatives Pearce, Lummis, Benishek, Duncan, LaMalfa, and Newhouse.

Mr. GOHMERT. The Subcommittee on Oversight and Investigations will come to order. The subcommittee is meeting today to hear testimony on the status of the Federal Government's management of wolves. Under Committee Rule 4(f), any oral opening statements at hearings are limited to the Chairman and the Ranking Minority Member. Therefore, I would ask unanimous consent that all other Members' opening statements be made part of the hearing record if they are submitted to the Subcommittee Clerk by 5:00 p.m. today.

Hearing no objection, so ordered.

Also, while I recognize that many people in attendance are very passionate about this issue, I must remind members of the audience that we will conduct this hearing in a professional and courteous manner. That means that only members of the committee and our witnesses will be speaking. That will minimize the distractions and allow us to have a proper evidentiary hearing. Any disruptive audience members will be removed immediately, not merely from the room, but from the building.

I ask unanimous consent that the Senator from North Carolina, Mr. Tillis; the gentlelady from Wyoming, Mrs. Lummis; the gentleman from Michigan, Mr. Benishek; the gentleman from South Carolina, Mr. Duncan; the gentleman from Arizona, Dr. Gosar; the gentleman from California, Mr. LaMalfa; the gentleman from Washington, Mr. Newhouse; the gentleman from Montana, Mr. Zinke; the gentleman from Virginia, Mr. Beyer; and the gentleman from New Mexico, Mr. Pearce be allowed to sit with the subcommittee and participate, if there is no objection.

Hearing none, that will be so ordered.

I now recognize myself for 5 minutes for an opening statement.

STATEMENT OF THE HON. LOUIE GOHMERT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. GOHMERT. For decades, ineffective, and sometimes destructive, Federal management of wolves has negatively impacted communities, economies, livestock, family businesses, recreationists, and even family pets in vast swaths of our Nation. While some wolf populations have increased to the point where they should have been delisted long ago, other efforts have failed miserably.

While it is mandated by law that our public lands must be managed to allow for multiple uses ranging from ranching and recreation, to timber harvesting and conservation, the U.S. Fish and Wildlife Service has not worked effectively with stakeholders that use our Nation's public lands, nor has it worked effectively with landowners or states in its recovery efforts.

Mismanagement on the part of the Fish and Wildlife Service, as identified by the Office of Inspector General, has raised even more concerns about wolf recovery efforts across the board.

For example, just last week, the Service announced that the 30-year red wolf recovery program in North Carolina is, for all intents and purposes, a failure. This announcement came after the Wildlife Management Institute and the OIG found that the Service violated its own rule by releasing 132 red wolves when it had only planned to release 12, underestimated the habitat required to recover the wolves at a sustainable level, could not effectively prevent wolf-coyote hybridization, and released wolves on private property without the landowner's consent.

However, instead of canceling the failed red wolf program, the Service is instead planning to nearly double the size of its captive breeding population, with the aim of eventually expanding the program to locations that could be anywhere between Texas, Pennsylvania, and the Atlantic Coast.

The Service is pursuing this course, even while admitting that there are substantial questions about wolf genetics and a lack of scientific consensus about whether the red wolf should even be regulated under the Endangered Species Act.

The Mexican wolf recovery program is similarly troubled. In July, the OIG found that Fish and Wildlife employees deliberately interfered in livestock depredation investigations, wolf nuisance complaints, and DNA sampling. One employee even went so far as to try to convince U.S. Department of Agriculture investigators to change their livestock depredation findings from clear wolf kills to coyote kills. And, even when ranchers are able to prove, without meddling from Fish and Wildlife, that a wolf killed their livestock, they are often under-compensated for their losses by livestock depredation reimbursement programs.

Furthermore, the Service is not upholding its responsibility to work with states. A Federal judge recently ruled that the Service failed to obtain the proper permissions from New Mexico to release even more wolves into that state. Yet, in spite of these problems, the Service has expanded the reintroduction area in Arizona and New Mexico, and there is talk of expanding the program to Utah and Colorado, despite the objections from those states.

Then there are the gray wolves located in the Northwest, California, and the Western Great Lakes. Management responsi-

bility for recovered wildlife is a right reserved to the states, and the Endangered Species Act is very clear about congressional intent in that regard. The recovered gray wolf, however, is a prime example of how constant litigation is used as a tool to indefinitely prevent states from managing recovered species.

For years, Idaho and Montana have shown that states can and do successfully and responsibly manage their wolves, and there is absolutely no reason why Wyoming, Minnesota, Michigan, Wisconsin, Utah, Oregon, Washington, and California should not be allowed to manage all of their wolves, as well.

Today we will hear a broad range of testimony from a variety of witnesses, including state fish and wildlife directors, ranchers for whom wolves are a daily concern, and from the Fish and Wildlife Service itself. We thank the witnesses for being here today, and look forward to your testimony.

[The prepared statement of Mr. Gohmert follows:]

PREPARED STATEMENT OF THE HON. LOUIE GOHMERT, CHAIRMAN, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

For decades, ineffective and sometimes destructive Federal management of wolves has negatively impacted communities, economies, livestock, family businesses, recreationists, and even family pets in vast swaths of our Nation. While some wolf populations have increased to the point where they should have been delisted long ago, other efforts have failed miserably.

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And yet, in spite of these problems, the Service has expanded the reintroduction area in Arizona and New Mexico and there is talk of expanding the program to Utah and Colorado despite objections from those states.

Then there are gray wolves located in the Northwest, California, and the Western Great Lakes. Management responsibility for recovered wildlife is a right reserved to the states, and the ESA is clear about congressional intent in that regard. The

recovered gray wolf, however, is a prime example of how constant litigation is used as a tool to indefinitely prevent states from managing recovered species.

For years, Idaho and Montana have shown that states can and do successfully, and responsibly, manage their wolves, and there is absolutely no reason why Wyoming, Minnesota, Michigan, Wisconsin, Utah, Oregon, Washington, and California should not be allowed to manage all of their wolves too.

Today we will hear a broad range of testimony from a variety of witnesses, including state fish and wildlife directors, ranchers for whom wolves are a daily concern, and from the Fish and Wildlife Service itself. I thank our witnesses for being here today and I look forward to your testimony.

Mr. GOHMERT. I also want to thank you for your patience. We had no control over when votes were called on the Floor, and it interfered, obviously, with our starting time; thank you for your patience.

With that, I will recognize Mrs. Dingell for an opening statement.

STATEMENT OF THE HON. DEBBIE DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mrs. DINGELL. Thank you, Mr. Chairman. More than perhaps any other animal, wolves provoke humankind's strongest emotional reactions. Look how many Members are here today; it is the largest attendance we have had in an O&I hearing.

Some see the wolf as a symbol of wildness, an indicator of balance and healthy nature in a world dominated by man and his machines—this should say men and women and their machines.

Others see the wolf as a nuisance, as an impediment to economic security and progress that never should have been allowed to return to its native lands. Still others see the wolf as a spiritual being, a powerful and noble teacher to be revered and protected.

Regardless of the different feelings the wolf invokes, as a practical matter, what the wolf is in most parts of the United States is a threatened or endangered species listed under the Endangered Species Act. That reality is the reason for today's hearing, and I hope that we can all keep in mind that the science and the law are in clear agreement that removing ESA protections for wolves where they are currently listed is not appropriate. I understand that it is a source of frustration for some people, but their numbers pale in comparison to the vast majority of Americans who support the return of wolves to the landscape.

In spite of Congress' ill-advised action to delist gray wolves in parts of the Northern Rocky Mountains in 2011, the progress made toward actual recovery of the species has put us on the cusp of being able to claim a significant Endangered Species Act success.

However, the work is not finished. Gray wolves have only started to return to their old haunts in the Pacific Northwest and California, and vast tracts of suitable habitat once occupied by wolves still exist in New York, Maine, and the Central Rockies.

In the American Southwest, the Fish and Wildlife Service has made significant progress toward restoring Mexican gray wolves to parts of Arizona and New Mexico. Unfortunately, this progress has stalled because of recent poor oversight of the program and a failure to develop a scientifically valid recovery plan to guide restoration of the species. Misinformation campaigns started and

perpetuated by landowners, state government officials, and others opposed to wolf reintroduction have not helped matters, and have only served to slow down the pace of recovery—an outcome that benefits no one.

On the East Coast, efforts to recover the red wolf in North Carolina were showing incredible success until 3 years ago. Unfortunately, despite polls showing that 80 percent of North Carolina voters, including 60 percent living in the red wolf recovery area, support red wolf recovery, the North Carolina Wildlife Resources Commission has pulled its support for the program. I am disappointed in the Fish and Wildlife Service's decision to abandon red wolf recovery efforts in North Carolina, and we all hope we can learn more today about how the Service should approach bringing this critically endangered species back from the brink of extinction.

I am afraid that, in addition to discussing the practical concerns, we will spend some time today rehashing many of the myths we keep hearing. So I would like to offer a few facts before we get started.

First, gray wolves, Mexican wolves, and red wolves are all native to the United States and the areas where they have been reintroduced. The science is clear that these species are not foreign imports or hybrids. They are American.

Second, wolves are not a major source of livestock mortality, particularly cattle. While wolves do pick off the occasional sheep or cow, their impact pales in comparison to that of disease and weather. That fact is illustrated in this graphic developed by a report from the U.S. Department of Agriculture. Already low predation by wolves can be driven even lower through nonlethal conflict reduction methods.

Third, wolves are not depleting populations of other wildlife to dangerously low levels. Wolves do, and should, eat elk, deer, moose, and other ungulates; but data published by states, including those represented at today's hearing, show that hunters continue to enjoy increased harvests of game animals, even with wolves on the landscape.

Finally, wolves are not a public hazard. Bees, domestic dogs, and deer kill far more people each year than the zero killed by wolves.

With that, I look forward to hearing from our witnesses today, and I yield back my 2 seconds.

[The prepared statement of Mrs. Dingell follows:]

PREPARED STATEMENT OF THE HON. DEBBIE DINGELL, RANKING MEMBER, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

Thank you, Mr. Chairman.

More than perhaps any other animal, wolves provoke humankind's strongest emotional reactions. Some see the wolf as a symbol of symbol of wildness—an indicator of balance and healthy nature in a world dominated by man and his machines. Others see the wolf as nuisance—an impediment to economic security and progress that never should have been allowed to return to its native lands. Still others see the wolf as a spiritual being—a powerful and noble teacher to be revered and protected.

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some people but their numbers pale in comparison to the vast majority of Americans who support the return of wolves to the landscape.

In spite of Congress' ill-advised action to delist gray wolves in parts of the Northern Rocky Mountains in 2011, the progress made toward actual recovery of the species has put us on the cusp of being able to claim a significant ESA success. However, the work is not finished yet. Gray wolves have only started to return to their old haunts in the Pacific Northwest and California, and vast tracts of suitable habitat once occupied by wolves still exist in New York, Maine, and the Central Rockies.

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I am afraid that in addition to discussing the practical concerns, however, we will also spend time today rehashing the same tired old myths that wolf opponents have continued using for decades, even after they have been soundly debunked. Therefore, I would like to offer a few facts before we get started.

First, gray wolves, Mexican wolves, and red wolves are all native to the United States and the areas where they have been reintroduced. The science is clear that these species are not foreign imports or hybrids. They are as American as mom and apple pie.

Second, wolves are not a major source of livestock mortality, particularly cattle. While wolves do pick off the occasional sheep or cow, their impact pales in comparison to that of disease and weather. That fact is illustrated in this graphic developed from a report by the U.S. Department of Agriculture. Already low predation by wolves can be driven even lower through nonlethal conflict reduction methods.

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Finally, wolves are not a public safety hazard. Bees, domestic dogs, and deer kill far more people each year than the zero killed by wolves.

With that, I look forward to hearing from our witnesses today, and I yield back.

Mr. GOHMERT. Thank you. I will now introduce our first two witnesses from our right.

Mr. Steve Guertin is the Deputy Director for Policy at the U.S. Fish and Wildlife Service. And then, Mr. Gordon Myers is the Director of the North Carolina Wildlife Resources Commission.

Next, I recognize the gentleman from Idaho, Mr. Labrador, for our next witness.

Mr. LABRADOR. Thank you, Mr. Chairman. It is my pleasure to introduce Director Virgil Moore this afternoon, and to welcome him to our subcommittee. Director Moore has served as the Director of the Idaho Department of Fish and Game since 2011. He received his M.S. from Idaho State University in zoology, and has over 40 years of professional experience in fish and wildlife management.

He has served in many positions for Idaho Fish and Game, including Deputy Director for Field Operations, Fishery Bureau

Chief, Information and Education Bureau Chief, Fisheries Research Manager, and various other field management positions as a fishery scientist.

He is directly involved with grizzly bear, gray wolf, sage grouse, wolverine, lynx, cutthroat trout, gold trout, steelhead, and salmon.

As Vice President of the Association of Fish and Wildlife Agencies, Virgil represents North America's fish and wildlife agencies to advance science-based management and conservation of fish and wildlife and their habitats in the public interest.

Thank you, Mr. Chairman. I also have another Idaho witness. Should I wait?

Mr. GOHMERT. Let me recognize the Ranking Member to introduce our next witness.

Mrs. DINGELL. I would also like to introduce Professor John Vucetich. He is a professor at Michigan Technological University, where he teaches population ecology and environmental ethics. He is the lead researcher on the wolves and moose of Isle Royale National Park at Lake Superior, Michigan. It is the longest study of any predator-prey system in the world.

He has authored more than 80 scholarly papers on wolf prey ecology, population genetics, extinction risk, and environmental ethics. He was on the Mexican wolf recovery team for almost 15 years, and was a peer reviewer of Wyoming's wolf management plan for the FWS.

He has also advised Members of Congress on wolf-related policy issues.

I am pleased to welcome a fellow Michigander to this panel today. Thank you for your time and service.

Mr. GOHMERT. Thank you. At this time we will recognize the gentleman from New Mexico, Mr. Pearce, to introduce our next witness.

Mr. PEARCE. Thank you, Mr. Chairman. It is my pleasure to introduce Alexandra Sandoval. She is the Director of the New Mexico Game and Fish Department, a position she has held since May of 2014. She is absolutely no stranger to the issues surrounding the Mexican gray wolf recovery program.

Director Sandoval, thank you for being here today.

Mr. GOHMERT. Thank you. I recognize the gentleman from Idaho to introduce our next witness.

Mr. LABRADOR. Thank you, Mr. Chairman. It is also my pleasure to introduce Brian Bean today. Brian is the co-founder of the Lava Lake Institute, and co-owner of Lava Lake Land & Livestock, and Lava Lake Lamb in south central Idaho—I am a little bit hungry now, after saying all that.

[Laughter.]

Mr. LABRADOR. Brian is a magna cum laude, Phi Beta Kappa graduate of Pomona College, where he was a dual major in biology and zoology. Brian and his wife Kathleen founded Lava Lake Ranch in 1999, with the intention of producing and marketing 100 percent grass-fed and finished lamb, while protecting the natural characteristics of the landscape.

In 2004, the Beans established the Lava Lake Institute for Science and Conservation. The Institute is a non-profit that

supports conservation research efforts. The Institute serves as the fiscal sponsor for the Wood River Wolf Project.

Welcome.

Mr. GOHMERT. And to introduce our last witness, Mr. Pearce, the gentleman from New Mexico.

Mr. PEARCE. Thanks again, Mr. Chairman. And I would like to say thanks to Tom Paterson from Luna, New Mexico. Tom runs the Spur Ranch Cattle Company in Luna with his wife, Callie, and his daughters, Lindsay and Caroline.

His boots-on-the-ground experience dealing with wolf depredation on the cattle at the Spur Ranch, and with Fish and Wildlife Service wolf management, sheds insight into what New Mexican ranchers are dealing with. I am confident that his experiences reflect that of the ranchers throughout our Nation who must conduct their operations in wolf reintroduction areas.

Mr. Paterson, thanks for traveling all the way to DC for this hearing.

Mr. GOHMERT. Thank you. Let me remind the witnesses that, under our Committee Rules, oral statements must be limited to 5 minutes. Your written statements will be part of the Committee hearing records, but the witness oral statement is limited to 5 minutes.

You will note your time is on the little indicator there. When you begin, the light on the witness table will be green. When there is 1 minute remaining, it turns yellow. Then, when the time is up it turns red, and that is when you need to finish up so I don't have to for you.

At this time the Chair would now recognize Mr. Guertin for his testimony.

You are recognized for 5 minutes, Mr. Guertin.

STATEMENT OF STEVE GUERTIN, DEPUTY DIRECTOR FOR POLICY, U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR, WASHINGTON, DC

Mr. GUERTIN. Good afternoon, Mr. Chairman, Ranking Member Dingell, and members of the subcommittee. Thank you for the opportunity to testify today with the views of the Fish and Wildlife Service and our report on our work to recover wolves across the lower 48 United States and Mexico. It is a great recovery program and management endeavor of our time. Our work over decades has led to successes, but also demonstrates the hard challenges that lie ahead.

In 1974, when wolves first received the protections of the modern-day Endangered Species Act, there were no wolves in the wild in the lower 48 states, except in northern Minnesota; elsewhere they had been eliminated after years of control programs, reductions of prey, and habitat degradation. Like most species protected by the ESA, the conditions that wolves faced as a species in the Lower 48 were dire when it was listed. And, similar to other species, restoring wolves at the landscape requires many years of sustained work among many partners.

Our primary goal, consistent with our legal mandates, is to prevent extinction of wolves, address threats to their long-term survival, recover wolves, and restore management of wolves to the

states. We are proud of the long-term collaboration among service field biologists and poly-professionals with Federal and state agencies, tribes, and non-governmental entities. This collaboration has enabled the gray wolf to make a markable recovery in much of the lower 48 states.

Wolves are now re-established in the Western Great Lakes and the Northern Rockies, large landscapes where only decades ago they had been exterminated. They have recently expanded at the Pacific Northwest and Northern California, and we believe the range will continue to grow under the capable management of our state wildlife agency partners. Wolf recovery in the Western Great Lakes and Northern Rocky Mountains has been an impressive success, due to both resiliency of wolves and the cooperative efforts of the Service's many and varied partners.

Success in these areas led the Service to determine that those gray wolf populations are biologically recovered, and no longer warrant listing under the Endangered Species Act. We proposed and finalized rules to reflect our science-based determinations of recovery under the ESA. Judicial review overturned our delisting for wolves in Wyoming and the Western Great Lakes, but we are appealing those decisions, and hearings are scheduled over the next month.

As we move forward with our mandate to recover wolves, the Service's focus now is on recovery of Mexican wolves in the Southwest and the red wolf in the Southeast, both of which were eliminated from the wild and are endangered under the ESA. The Service remains committed to the recovery of these wolves. Their recovery is dependent on captive breeding programs, reintroduction of captive wolves into the wild, and managing for secure, self-sustaining wolf populations.

These starkly different circumstances refer both to the successes and the challenges associated with restoring this large predator to the landscape. The successes we have achieved and the challenges remaining underscore the importance of strengthening and expanding partner and community support for wolf recovery.

Recovery efforts involving reintroduction of large carnivores are inherently controversial, especially to local communities. Social tolerance for the presence of wolves is vital for success. Gaining social tolerance requires us to engage local communities and landowners to address their concerns.

Building social tolerance requires us to manage conflicts with wolves in ways that strengthen community support. That means providing states and landowners with the tools and expertise to prevent wolf-livestock conflicts, and, in some cases, removing problem wolves and compensating landowners and lease holders for their losses when they occur.

It will take continued collaboration between the Service and our state, tribal, and community partners to bring these populations off of the Federal list of threatened and endangered species, and return management to the states.

I would like to recognize the contributions of my colleagues on this panel. The work of our state agency partners and private landowners to conserve and co-exist with wolves is critical to their

recovery and subsequent return to state management. I look forward to hearing their perspectives on this complex issue.

The Service will continue to implement the mandates of the Endangered Species Act and keep working toward the long-term recovery of wolves in the Lower 48 and Mexico. If we are successful in engaging the support of our partners and stakeholders, we are confident we will be successful.

Thank you for the opportunity to testify today.

[The prepared statement of Mr. Guertin follows:]

PREPARED STATEMENT OF STEPHEN GUERTIN, DEPUTY DIRECTOR FOR POLICY, U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR

Chairman Gohmert, Ranking Member Dingell, and members of the subcommittee, thank you for the opportunity to appear before you today to testify on the U.S. Fish and Wildlife Service's (Service) work to recover wolves across the Lower 48 United States. My name is Stephen Guertin and I am the Deputy Director for Policy for the Service.

The wolf is an iconic yet controversial example of the Endangered Species Act's (ESA) success in preventing extinction and promoting recovery. Because of years of sustained and cooperative efforts of Federal and state agencies, tribes, and non-governmental entities, wolves have made an impressive recovery in the Western Great Lakes (WGL) and the Northern Rocky Mountains (NRM). They are re-established in large landscapes where only decades ago they had been effectively exterminated, and have recently expanded their range into the Pacific Northwest and Northern California. In the Southwest and Southeast, however, wolves exist in the wild only as reintroduced experimental populations and continue to be highly endangered. These starkly different circumstances reflect both the successes and the challenges associated with restoring a charismatic large predator to the landscape. Our goal, consistent with our legal mandates, is to recover wolves—so that they are no longer threatened or endangered—and return management of those recovered wolves to the States.

BACKGROUND ON WOLVES AND ESA PROTECTION

The ESA is one of the Nation's most important conservation laws. It is implemented jointly by the Service and the National Marine Fisheries Service. The law's stated purpose is to provide a program and means for the conservation of threatened and endangered species and the ecosystems upon which they depend. The ESA provides a safety net for species that are at risk of going extinct. The Service uses the best available scientific and commercial information to determine whether species need to be listed, to identify and address the threats to the species, and to facilitate the recovery of the species. When a species is designated as threatened or endangered—or "listed" under the ESA—it is in dire need of help.

Throughout their range, wolves are keystone predators and have a profound effect on the ecosystems they inhabit. The wide range of habitats in which wolves can thrive reflects their adaptability as a species. In his essay titled, "Thinking Like a Mountain," the great American conservationist Aldo Leopold described the cascading effects of losing wolves in a forested mountain ecosystem—the resulting increase of deer, followed by overgrazing, deforestation and erosion, and then the collapse of deer after having eaten themselves out of house and home.

Wolves were once found across the northern hemisphere of the planet, including most of North America. When Europeans began to colonize America in the 1600s, wolves were widely distributed and could be found in each of what are now the lower 48 states. As human populations across America grew so did fears of wolves and other predators and the perceived risks they posed to personal safety, livestock, pets, and game species. Extensive predator control programs, magnified by the use of bounties, and combined with habitat degradation and a declining prey base, resulted in the extirpation of wolves from most of the lower 48 states early in the 20th century, with the exception of only a few hundred remaining wolves in northern Minnesota and Isle Royale in Michigan. No wolves persisted in vast wild areas such as the NRM and the desert southwest.

Wolves were among the first species added to the list of endangered species, starting with the red wolf (*Canis rufus*) and subspecies of the gray wolf (*Canis lupus*) in 1967 and 1973 under precursors to the ESA—the Endangered Species Preservation Act of 1966 and the Endangered Species Act of 1969. Both red wolves and gray wolves were listed as separate species under the modern ESA in 1974 and

the Mexican gray wolf subspecies was listed as endangered in 1976. By 1978, all gray wolves were listed as an endangered population at the species level throughout the contiguous United States and Mexico, except for those wolves in Minnesota, which were classified as threatened.

In 1988, Congressman John Dingell, a sponsor of the original ESA, wrote the following about the passage of the law in 1973, "The goal Congress set then was unparalleled in all of history. Our country resolved to put an end to the decades—indeed, centuries—of neglect that had resulted in the extinction of the passenger pigeon and the Carolina parakeet, and the near extinction of the bison and many other species with which we share this great land. If it were possible to avoid causing the extinction of another species, we resolved to do exactly that . . . When Congress passed the Endangered Species Act, it set a clear public policy that we would not be indifferent to the destruction of nature's bounty."

The ESA has been successful in its essential goal to conserve listed species, which effectively protects the Nation's biological diversity heritage for the benefit of future generations of Americans. Since it was enacted by Congress in 1973, the ESA has successfully prevented the extinction of more than 99 percent of the over 1,500 species it protects. Recovering species to the point where they are ready for delisting and no longer need the protections of the ESA often requires focused conservation efforts over many years, often decades, to implement recovery actions. In the last 8 years, 19 species have been delisted due to recovery and returned to the state management. Recently delisted species include the Louisiana black bear, Oregon chub, Delmarva fox squirrel, Virginia northern flying squirrel, Modoc sucker, island night lizard, and brown pelican.

The ESA has been successful for wolves. Extinction in the lower 48 states was averted and the long, sustained work of recovery—along with state, local, tribal, and other Federal partners—has produced thrilling successes. The ESA provides the Service with management flexibilities that have proven vital in furthering the recovery of wolves, including the designation of nonessential experimental populations under section 10(j) of the law. With a nonessential experimental population, the Service is able to introduce a population with flexible management options available that are tailored to the needs and concerns of particular area of introduction as well as the species' needs. Probably the best-known wolf recovery effort was the reintroduction of gray wolves into Yellowstone National Park in 1995. Some studies indicate that in relatively pristine areas such as Yellowstone, the establishment of healthy wolf packs has had a positive cascading effect on the ecosystem. These effects to relatively pristine areas, which may still be unfolding and are being studied, appear to include keeping elk from overgrazing along exposed river banks where they are vulnerable to wolf predation, leading to regrowth of riparian vegetation, an increase in beaver colonies, and the resulting positive habitat changes that beaver dams provide to a host of wildlife species. While these effects may occur at varying degrees elsewhere, they are increasingly modified and subtle the more an area is affected by humans.

As with our conservation work for any listed species, recovery of wolves is not something the Service can or has achieved alone. Throughout the wolf recovery process, the Service has worked in close partnership with Federal and state agencies, tribes, private landowners, and other stakeholders. Wolf recovery in the WGL and the NRM has been an amazing success due to both the resiliency of wolves and the cooperative efforts of the Service's many and varied partners.

Bolstered by reintroductions and the conservation and management as species protected by the ESA, wolves have repopulated portions of their historical range in the lower 48 states. Restoration throughout the species' entire historical range in the United States is not required for recovery under the ESA, nor is it a reasonable expectation for species such as wolves given the expansion of human populations and resultant habitat degradation. In the NRM and WGL the success of recovery efforts has been remarkable. These animals are resilient and their range is naturally expanding. The success in these areas led the Service to determine that gray wolves are biologically recovered under the requirements of the ESA, with the exception of Mexican gray wolves, which remain endangered. We have proposed and finalized a number of rules to reflect our science-based determination of recovery under the ESA; courts have overturned some of those delisting rules, as judicial review remains an important part of the ESA. The red wolf remains a separately listed entity.

STATUS OF WOLVES IN THE LOWER 48 UNITED STATES

Gray Wolves

Gray wolf recovery efforts have long focused on three recovery areas—the NRM, the eastern United States, and the Southwest. Recovery plans were developed in each of these areas to establish and prioritize recovery criteria and actions appropriate to the unique local circumstances of the gray wolf.

Wolves in the Northern Rocky Mountains

At the time of listing, wolves in the NRM region were completely extirpated. In 1982, a wolf pack from Canada began to occupy Glacier National Park along the U.S.-Canada border and a few years later, the first litter of pups documented in over 50 years was born in the Park. This natural recolonization was the beginning of wolf recovery in the NRM. Under the protections of the ESA, wolf populations in the NRM have rebounded thanks to natural dispersion and successful reintroduction efforts in Yellowstone National Park and central Idaho. Since delisting, under state management, the wolf population in this region continues to hold steady. As of December 31, 2015, there were at least 1,704 wolves in 282 packs in Montana, Idaho and Wyoming. An additional 200 wolves in 34 packs were estimated in Oregon and Washington.

By the mid 2000s, wolves in the NRM had met the Service's recovery goals under the ESA, prompting the Service to delist the gray wolf distinct population segment in this region in 2008 due to recovery. Following that initial delisting, NRM wolves have had a litigious history, with several court challenges filed against the Service's decisions. Ultimately, the Congress directed the Service to reinstate our delisting rule and shielded it from further legal challenge. Today, wolves in Idaho, Montana, eastern Oregon, eastern Washington, and north-central Utah are no longer listed under the ESA and are being successfully managed by the states. Both Idaho and Montana manage wolves in accordance with state management plans, under which their wolf populations have remained secure and well above recovery objectives. Similarly, the Service's delisting of wolves in the state of Wyoming in 2012 drew a legal challenge. That delisting was vacated by a court decision in 2014 and the Service currently manages wolves in Wyoming as a nonessential experimental population under the ESA in accordance with that ruling. The Federal Government has appealed this ruling, and oral arguments in this appeal are scheduled for this Friday, September 23, 2016.

Wolves in the Western Great Lakes

Unlike the NRM region, wolves were never completely extirpated from the WGL region; it is estimated that the Minnesota wolf population was comprised of a few hundred individuals at the time of listing. Under the protections of the ESA, this population naturally expanded its range into Wisconsin and Michigan. The current population of wolves in the WGL region is derived from expansion of this remnant population in northeastern Minnesota, supplemented by possible contributions from wolves from southern Ontario. Like the wolves in the NRM region, WGL wolves have exceeded the recovery goals that the Service set, with more than 3,600 wolves estimated in Minnesota, Michigan, and Wisconsin. The Service first delisted these wolves in 2007, though today they remain listed under the ESA due to ongoing litigation through which a court vacated our final delisting rule in 2014. The Federal Government is appealing the court's decision to reinstate ESA-protections for WGL wolves; oral arguments in this appeal are scheduled for mid-October.

Mexican Gray Wolves

The Mexican gray wolf is the rarest subspecies of gray wolf in North America. Once common throughout portions of the southwestern United States, the Mexican wolf was all but eliminated from the wild by the 1970s due to extensive predator control initiatives. Recovery efforts for the Mexican wolf began when the subspecies was listed as endangered in 1976.

Following the capture of some of the last remaining Mexican wolves in the wild in Mexico, the Service and Mexico collaborated to establish a binational breeding program with seven founding wolves. Today, the approximately 50 captive breeding facilities in the two countries house 240 to 300 Mexican wolves, which are managed under the Mexican Wolf Species Survival Plan. Wolves from the captive breeding program are used for reintroduction in the United States and Mexico. The Service established a nonessential experimental population of the Mexican gray wolf in Arizona and New Mexico in 1998, and the first Mexican wolves were released to the wild in the Blue Range Wolf Recovery Area within the Mexican Wolf Experimental Population Area (MWEPA) in 1998.

In January 2015, the Service published the Revision to Regulations for the Nonessential Experimental Population of the Mexican Wolf (80 FR 2512–2567, January 16, 2015). This 2015 rule under section 10(j) of the ESA provides an expansion of the area where Mexican wolves may occur and where Mexican wolves can initially be released from captivity compared to the previous 1998 10(j) rule. The 2015 rule also provides a population objective of 300 to 325 wolves in the MWEPA.

Also in January 2015, the Service also issued a final rule listing the Mexican wolf as an endangered subspecies. It is now a separately listed entity under the ESA, whereas it had previously been protected under the more generic listing for the gray wolf (*Canis lupus*) species in the lower 48 states and Mexico.

The experimental population of Mexican wolves peaked at 110 wolves in the wild in 2014, but declined to 97 wolves in 2015, principally due to reduced pup survival in 2015 relative to 2014. Since 1998, more than half of the documented Mexican wolf deaths are due to illegal killing. The release of Mexican wolves from the more genetically diverse captive population remains critical to improving the genetic health of the experimental population and moving the Mexican wolf toward recovery.

The Service reinitiated the process to revise the 1982 Mexican Gray Wolf Recovery Plan in December 2015. The Service is working with participants from the New Mexico Department of Game and Fish, Arizona Game and Fish Department, Utah Division of Wildlife Resources, Colorado Parks and Wildlife, Federal agencies in Mexico, and independent scientists from the United States and Mexico to assist us in gathering and assessing scientific information pertinent to our development of a revised recovery plan. The revised recovery plan will provide measurable and objective criteria which, when met, will enable us to remove the Mexican wolf from the list of endangered species and turn its management over to the states. The Service expects to publish a final recovery plan by the end of November 2017.

Gray Wolves Across the Remainder of the Lower 48 States

For nearly four decades, the Service has consistently taken a regional approach to gray wolf recovery in the lower 48 states and Mexico. In other words, we have considered recovery to entail establishment of secure, healthy and stable populations of gray wolves in the WGL, the NRM, and the Southwest. We have achieved that goal for gray wolves in the WGL and the NRM, and today we continue to stand by our 2009, 2011, and 2012 final delisting rules.

Under state management gray wolves have expanded their range and now are becoming re-established in western Oregon and Washington, and are also beginning to move into Northern California. Because the 1978 listing encompassed gray wolves in the lower 48 states and Mexico, those wolves in western Washington, western Oregon, and northern California, i.e., outside of the delisted NRM distinct population segment, remain fully protected under the ESA as an endangered species. Accordingly, in June 2013, the Service issued a proposed rule to delist the gray wolf throughout the remaining conterminous United States, exclusive of the now separately listed Mexican gray wolf in the Southwest. That proposed rule was dependent upon the gray wolf populations in the NRM and the WGL being recovered and off the list. However, as noted above, our delisting decisions for gray wolves in Wyoming and the WGL were challenged and vacated. Our ability to move forward with the 2013 proposal is dependent upon the Federal Government prevailing on appeal of those cases. It remains our science-based view today that the gray wolf is recovered in the lower 48 states, outside of the Southwest, and we should be focusing our recovery efforts on the endangered Mexican gray wolves.

Red Wolves

The red wolf is one of the world's most endangered wolf species. Once common throughout the eastern and south-central United States, red wolf populations were decimated by the early part of the 20th century and reduced to coastal areas of Texas and Louisiana.

When the red wolf was designated as an endangered species in 1967, the Service initiated efforts to conserve and recover the species. The Service began to locate and capture as many red wolves as possible for the purposes of establishing a program to breed the species in captivity and one day reintroduce the red wolf into a portion of its former range. From this effort, 14 red wolves became the founding members of the captive-breeding program and the ancestors of all red wolves existing today. Within a few years 12 of these red wolves were successfully reproducing in captivity, allowing the Service to consider reintroducing the species in the wild as a nonessential experimental population (NEP). In 1987, the Service released four male-female pairs of red wolves to establish an experimental, nonessential population at Alligator River National Wildlife Refuge in the Albemarle-Pamlico Peninsula of

North Carolina. A NEP of red wolves also was established at Great Smoky Mountains National Park in 1991, but the Service ended that project in 1998 due the lack of adequate food sources for the wolves. Today, approximately 45 red wolves roam their native habitats in a five-county NEP area in northeastern North Carolina, and nearly 200 red wolves, including 29 breeding pairs, are maintained in over 40 captive breeding facilities throughout the United States.

In 2013, the Service and North Carolina Wildlife Resources Commission entered into broad agreement acknowledging growing concerns from private landowners regarding management of red wolves and coyotes. Both agencies recognized steps were needed to improve management of the nonessential, experimental red wolf population, which included the need to conduct an evaluation of the Red Wolf Recovery Program and the implementation of its recovery actions in five counties in northeastern North Carolina.

On September 12, 2016, the Service announced significant changes for red wolf recovery after a 2-year, two-step review of the entire Red Wolf Recovery Program, including the evaluation of the captive population and the nonessential, experimental population in North Carolina. The review began in 2014 with an independent, peer-reviewed program assessment by the Wildlife Management Institute and was expanded in June 2015 to include the recommendations of a red wolf recovery team that examined feasibility of recovery in the wild, population viability, red wolf taxonomy, the historical range, and human dimensions.

Science and solid professional management decisions are driving future actions. We are pursuing recovery. One of the most significant findings of the Service's review was that the captive population is not secure. With no changes to current management, the red wolf species will likely be lost within the next decade. More animals are needed in captivity to secure the species' survival and to support any wild population, including the current NEP in North Carolina.

The red wolf is a conservation-reliant species that requires intensive management. As such, the Service will implement a series of actions to secure the captive and wild red wolf populations. To secure the captive population, the Service will work with its partners to increase capacity and reach the biological goal of at least of 400 animals with 52 breeding pairs. Additionally, all red wolves will be managed as a single meta-population with occasional movement of animals between captivity and the wild. The Service also will be proposing to reduce the scope of the NEP to Federal lands within Dare County only. Focusing efforts to Federal lands is necessary to re-establish management control over the wild population by removing isolated wolf packs from lands where the Service lacks access, incorporating these animals into the captive population as appropriate, and managing the remaining animals in accessible areas to minimize and manage risks of hybridization. This will result, in the near term, in a smaller nonessential, experimental population in terms of population size, the number of packs/breeding pairs, and the area occupied, and a larger, more secure and genetically robust population in captivity to provide a solid foundation for recovery of the species.

Recovery efforts involving reintroduction of large carnivores are inherently controversial, especially to local communities. The fact that red wolf conservation inevitably means reintroducing a large carnivore onto a landscape dominated by private lands (90 percent of the Southeast) makes red wolf conservation uniquely challenging. Without private landowner support, the Service will not be able to recover the red wolf.

The future path for red wolf recovery announced last week reaffirms our commitment to work closely with landowners as we recover the species. The Service will continue its efforts to remove red wolves from private lands when requested to do so by the landowner. We also will continue to seek written agreements with willing landowners to facilitate management of the wild wolves. The Service also recognizes that fundamental changes are needed in the way private landowners and other stakeholders engage in management of wild red wolves. As such, we are working with the North Carolina Wildlife Resources Commission on a substantial human dimensions project that will be completed in 2017. This work is crucial to a better understanding and greater clarity about the different opinions and attitudes of our citizens.

The complexity and scale of proposed changes for red wolf recovery will require more resources than what the Service and its partners have available. Therefore, the Service will continue to seek the support and input of private landowners as well as state partners, conservation groups and others when implementing the actions that will safeguard the species and eventually achieve recovery of the red wolf.

LEVERAGING PARTNERSHIPS TO FURTHER RECOVERY

Across the Service's work on threatened and endangered species, we are actively engaged with conservation partners and the public in the search for improved and innovative ways to conserve and recover imperiled species. This is particularly true in our efforts to recover wolves. The Service works closely with our state, local, tribal, and private partners to achieve the recovery of gray wolves in the lower 48 states and the re-establishment of Mexican and red wolves.

Tribal Partners

Since the NRM wolf program's inception in the 1980s, the Blackfeet Tribe has been a strong supporter of and collaborator with the Service, furthering the return of this culturally important iconic animal to tribal lands. The tribe came to the discussion table in the early development of the recovery goals, and consistently supported those goals through several legal challenges. With financial and technical support from the Service, a tribal biologist worked closely with the Service on the ground, coordinating trapping and monitoring efforts with the Montana Department of Fish Wildlife and Parks and Wyoming Game and Fish Department and facilitating access to tribal lands for control actions associated with livestock depredation actions. This collaboration allowed the incorporation of Blackfeet culture and traditions into the management of wolves on the reservation and supported tribal autonomy within the bounds provided by the ESA. The strong, positive working relationship between the Service and the Blackfeet Tribe has helped the NRM wolf recovery program to succeed in Montana.

The White Mountain Apache Tribe (WMAT) has been an active partner in Mexican wolf recovery for almost 15 years. The Service provides annual funding for the tribe's Mexican wolf management and monitoring program, in accordance with a Service-approved management plan. The tribe's support has been extremely beneficial to the Service due to the geographic location of their tribal land within our experimental population area. In addition, they have demonstrated tremendous leadership communicating the benefits and impacts of tribal wolf management to other tribes in the region.

The Service hosts a Mexican wolf Tribal Working Group to provide opportunities to discuss wolf-related issues that may interest or impact the almost three dozen tribes in the Southwest. The Tribal Working Group contributed substantially to the revision of the Mexican Wolf Experimental Population rule and associated Environmental Impact Statement and is currently engaged in the development of the revised recovery plan. Through this partnership, the working group is able to advocate for the cultural, social, logistical, economic, and biological significance of Mexican wolves to the tribes. The ongoing work of the Mexican wolf Tribal Working Group is a particularly strong example of the Service's focus on developing and maintaining relationships with the tribes.

State Partners

State fish and wildlife agencies are essential partners in implementing the ESA to protect our most at-risk species across the country. The state of Wisconsin first protected the gray wolf in 1957, 17 years prior to the wolf's listing under the ESA. After the wolf was listed as federally endangered, wolves began returning, dispersing from Minnesota. The Wisconsin Departments of Natural Resources (DNR) started monitoring wolves in 1979 by radio-collaring and tracking wolves, surveying for winter tracks, and conducting summer howling surveys. State biologists such as those in Wisconsin are essential to monitoring efforts, as the Service typically does not have the personnel available to adequately collect monitoring data, trap and collar animals, and conduct other on-the-ground management activities. Despite limited personnel, the Service provides financial resources and technical expertise to equip states and local communities to engage in wolf monitoring and recovery.

State agencies such as the Wisconsin DNR play an important role in fostering public awareness and social tolerance for wolves. State agencies are often embedded in the local communities and their partnership enhances the Service's public outreach, improves citizen understanding of wolves, and increases involvement in wolf management. One outstanding example is Wisconsin DNR biologist Adrian Wydeven, who received the Service's annual Recovery Champion reward in 2013 for his efforts to recover wolves in the state. Of particular note were Mr. Wydeven's efforts engaging with multiple stakeholders, interest groups, and members of the public to create an environment in which Wisconsin's wolf population was allowed to grow.

Section 6 of the ESA directs the Service to cooperate with states to the maximum extent practicable to achieve recovery, and authorizes the Service to enter into cooperative management agreements with states. The California Department of Fish

and Wildlife (CDFW) currently has a Section 6 agreement with the Service that provides CDFW the authority to manage for the conservation of endangered or threatened species within the state, including wolves. If the Service is able to move forward with its 2013 proposed rule, the management of the gray wolf in California will be returned to the state. In anticipation of this possibility, the CDFW is initiating development of a state wolf conservation and management framework in advance of an implementable management plan. This framework, through the state's Section 6 agreement with the Service, will allow CDFW to lead several aspects of wolf management, including investigating reports of situations involving wolves, monitoring wolf activity through capture and radio-collaring, and coordinating with other state and local entities.

The Service works closely with the Arizona Game and Fish Department in the management of the Mexican wolf. This collaboration is conducted under the framework of a Memorandum of Understanding with the state and other Federal and state agencies, counties, and tribes. Arizona Game and Fish Department is a key partner in the day-to-day management of Mexican wolves in Arizona, providing education, and the development of relationships with local communities, landowners and livestock permittees. The Service provides annual funding to Arizona Game and Fish Department for assistance in managing Mexican wolves in Arizona.

Ranchers and Livestock Producers

Reintroduction of a top predator such as the wolf is highly complex and often controversial; the Service recognizes that there can be real economic consequences to livestock producers who co-exist with wolves. The Service has long held that social acceptance of wolves by landowners, particularly ranchers, in wolf country is an essential ingredient for wolf recovery. To encourage social acceptance, the Service has aggressively managed wolves that consistently prey on livestock and supports compensation to ranchers for documented livestock losses through programs such as the Federal Wolf-Livestock Demonstration Project, USDA's Livestock Indemnity Program, and the Mexican Wolf/Livestock Council.

In an effort to incorporate divergent views on the Mexican wolf reintroduction, the Service appointed an 11 member Mexican Wolf/Livestock Council in 2011, a volunteer group composed of livestock producers, tribes, environmental groups, and county representatives. The Council developed a strategic plan to address Mexican wolf-livestock conflicts. The Strategic Plan is comprised of three core strategies: payments for wolf presence, funding for conflict avoidance measures, and funding for depredation compensation.

From 2011 to 2015, a total of $594,000 has been granted from the Wolf-Livestock Demonstration Project to Arizona Game and Fish Department and the New Mexico Department of Agriculture, which in turn provide the funding for allocation by the Mexican Wolf/Livestock Council. This funding is administered by the National Fish and Wildlife Foundation through Memoranda of Agreement with the states, and is disbursed at the direction of the Council. These Federal grants are matched with non-Federal funding provided by Defenders of Wildlife and Mexican Wolf Fund, which provide funding directly to livestock producers for implementation of proactive conflict avoidance measures (for example, range riders, fencing and flagging). Another $70,000 was granted from the Wolf-livestock Demonstration Program to the White Mountain Apache Tribe for proactive measures.

Under the Council's Strategic Plan, the Payments for Presence Program has provided some financial compensation to offset the additional management costs associated with the presence of wolves. This program recognizes the economic impact of co-existing with wolves, including undetected depredations, and changes in livestock behavior that can result in a reduction of weight gain and reproductive rates, and increased management costs. In 2014 and 2015, the Council approved payments to 28 and 35, respectively, qualifying Arizona and New Mexico livestock operators totaling $85,500 to help defray the costs of managing livestock on a landscape with wolves.

The Strategic Plan also provides funds to support the implementation of wolf-livestock proactive conflict avoidance measures by livestock producers through Defenders of Wildlife and the Mexican Wolf Fund. Both organizations are members of the Mexican Wolf/Livestock Council and fund voluntary adaptive management techniques to reduce wolf-livestock conflicts. Tools and techniques such as increased human presence, timed calving, range riders, turbo fladry (temporary electric fencing with flagging), and use of alternate pastures are just a few of the approaches that have been used successfully to keep both livestock and wolves safe.

The third strategy implemented through the Co-existence Plan is to provide compensation for livestock death or injury, including working dogs and livestock other than sheep and cattle. The Council has been providing compensation for confirmed

or probable livestock depredations by Mexican wolves since September 2010. This is done in partnership with USDA's Wildlife Services, which investigates and confirms wolf kills before a rancher can receive compensation. The Council and the Service recognize that depredation compensation does not fully address the costs experienced by ranchers due to wolf presence. As a result, wildlife managers have placed greater emphasis on conflict avoidance in recent years to help the Mexican wolf population grow alongside profitable livestock operations.

These programs implemented through the Council have helped address the economic concerns of livestock producers that have experienced wolf depredations on their livestock. While the Council is not able to fully compensate ranchers for the costs of co-existing with wolves, through the Strategic Plan, they are able to create incentives for livestock producers to promote viable ranching operations, self-sustaining Mexican wolf populations, and healthy western landscapes.

CONCLUSION

In 1973, Congress provided the Nation with a strong tool to conserve and recover our most imperiled species and the ecosystems upon which they depend—the ESA. Since they were first listed in 1974, gray wolves in the WGL and NRM have rebounded from near extirpation, thanks to strong protections that guard against extinction and to the flexibility that the ESA affords the Service as managers. These flexibilities have allowed the Service to cultivate strong, lasting, and productive partnerships with a wide range of stakeholders; partnerships that have proven integral in the biological recovery of gray wolves. But it was a complex and difficult path, complicated by the passion that the public brings to all matters relating to wolf conservation, on all sides of the issue. There are some who think recovery is not yet achieved for these wolf populations, or that question the commitment of the states to manage wolves sustainably. As a result, our delisting decisions for wolves in Wyoming and the WGL were challenged, and the final outcome is now in the hands of the courts.

In contrast, the Mexican gray wolf and the red wolf remain highly endangered. They were effectively extirpated from the wild and have be reintroduced into portions of their former range that now abound with threats—illegal shooting, conflicts with livestock production, sea level rise, genetic swamping by coyotes, low social tolerance, and many other challenges. No one said the job would be easy, and the Service is committed to continue the hard work of recovering the Mexican gray wolf and the red wolf in partnership with affected landowners, state and Federal agencies, tribes, the government of Mexico, academia, the conservation community, and others so that Mexican and red wolves can continue to be part of the remarkable natural biodiversity of the United States.

Challenges as well as opportunities remain for wolf recovery in the Lower 48, and it will take continued collaboration between the Service and our partners to finish the work to bring these species and populations off of the Federal list of threatened and endangered species and return management to the states. To reduce the time until that day comes, wildlife managers, government agencies, and the public must absorb the wisdom of Leopold and "think like a mountain" when it comes to wolves.

QUESTIONS SUBMITTED FOR THE RECORD TO STEVE GUERTIN, DEPUTY DIRECTOR FOR POLICY, U.S. FISH AND WILDLIFE SERVICE

Questions Submitted by Rep. Gohmert

Question 1. The U.S. Fish and Wildlife Service announced its intent to double the size of its red wolf captive breeding population, with the aim of eventually reintroducing those wolves into the wild anywhere in the region between Texas, Pennsylvania, and the Atlantic Ocean. Please identify the specific areas in which the Service is considering introduction. Please also identify the Service's goal for total number of wolf reintroduction areas and the number of wolves that would likely be introduced in each area.

Answer. No specific locations for reintroduction have been identified at this time. The Service must first secure the captive population of red wolves before considering the establishment of any new populations in the wild. This past September, the Service committed to identifying potential new sites for additional reintroduced populations by October 2017. To do so, the Service will coordinate closely with state fish and wildlife agencies as it works collaboratively through the recovery planning process to identify potentially suitable sites based on habitat characteristics. This would include stakeholder and partner engagement, appropriate rulemaking, and

public review and comment. The current Red Wolf Recovery Plan calls for the establishment of three wild populations. It is premature to speculate on the number of wolves that may be released at any future site.

Question 2. The Service severely underestimated the habitat needed for successful red wolf recovery in North Carolina and Tennessee. Please explain, in thorough detail, the methodology that the Service will use to evaluate potential reintroduction areas throughout the region to ensure that enough habitat is available in future red wolf recovery efforts.

Answer. The Service learned a great deal from its experience with red wolf reintroductions through the nonessential, experimental population in eastern North Carolina to date. The Service now has a much better understanding of red wolf habitat and space requirements, as well as other important logistical and societal factors that must be considered in establishing and managing a wild red wolf population. We now know the space needs of red wolves exceed the available Federal land base in eastern North Carolina. As such, successful reintroduction efforts must engage private landowners in reintroduction decisions and population management and must ensure that the interests and needs of the community are protected. The recent report by the Red Wolf Recovery Team (https://www.fws.gov/redwolf/docs/red-wolf-recovery-team-recommendations-facilitated-by-group-solutions-inc.pdf) concluded that the socio-political factors related to red wolf reintroductions are as important as ecological factors in determining the likelihood of success. The Service will carefully consider these societal needs and ensure that affected communities are fully engaged in all potential reintroduction efforts.

Question 3. What exactly does the Service mean when it says it will manage the red wolf captive breeding population as part of the nonessential, experimental population? Please explain, in detail, how this management approach will work. Service staff also mentioned that captive wolves will receive a "wildlife experience," please explain the meaning of "wildlife experience" in this context.

Answer. Conservation of genetic diversity is an important aspect of recovering species, including the red wolf. In the past, the Service's partners in the red wolf Species Survival Plan managed genetic diversity within the captive populations by carefully selecting the wolves that will be paired for breeding purposes on an annual basis. This process has conserved approximately 89 percent of the genetic diversity represented in the 14 founding wolves. Our intention going forward is to better integrate the wild red wolf nonessential, experimental population into the overall management of genetic diversity within the entire population by bringing wild red wolves that are of particularly high genetic value into captivity to be paired with captive animals. The Service plans to manage all red wolves, both the captive breeding population and nonessential, experimental population, as a single entity. Animals will be moved between the captive and wild populations to maintain genetic diversity for both populations.

Maintaining a wild population that is fully integrated with the captive population will allow for animals removed from the wild to support the necessary expansion and improved genetic health of the captive population and also retain some of the influences of natural selection on the gene pool. A wild population also would serve as a small stock source for new reintroduction efforts. Selecting animals that are believed to have the best chance of surviving the initial release, successfully establishing territories and reproducing is essential to maximize the chances for success of a new population of red wolves. These qualities are more likely to be found in wild-born or wild-fostered wolves. Additionally, any wolf released into unfamiliar territory faces increased risks. These risks are reduced for animals that are already skilled hunters, not habituated to human presence and care, and fostered in the wild. The chance for survival increases for introduced wolves if they have experienced living on their own in the wild. The concept of "wild experience" incorporates natural selection into captive breeding efforts as well as the fostering of captive-bred pups in the wild.

Question 4. How has the Service addressed its failures to receive written consent of owners prior to releasing wolves on private property? How will the Service keep red wolves off of private property going forward? Has the Service standardized its procedures for dealing with wolves and/or wolf releases on private property? If so, please provide written documentation of those procedures.

Answer. Before 2014, the Service did not require written consent for red wolf recovery actions on private lands. This was consistent with the 1995 governing rule (50 C.F.R. 17.84(c)), which did not require such written consent. During that time frame, however, the Service did enter into written or verbal agreements with landowners to access private lands for the management of red wolves. In 2014, and

thereafter, the Service required written consent from willing private landowners for all red wolf recovery actions on their properties. Also in 2014, the Service stopped the practice of relocating red wolves onto private lands.

In September 2016, the Service announced it would refocus the project to Federal lands within Dare County, North Carolina. The Service recognizes that red wolves will not stay on Federal lands. Prior to the September 29, 2016, preliminary injunction by Federal Judge Terrence Boyle, the Service had committed to removing red wolves from private lands when requested to do so by the landowner in accordance with the 1995 rule. In accordance with the injunction, the Service now can only remove red wolves when there is a risk of harm to people or property. Red wolves removed from the landscape will be handled and cared for humanely. Some wolves removed from private lands would be released on Federal lands in Dare County and others will be relocated to a captive breeding facility. The Service will continue to seek written agreements with willing landowners adjacent to Federal lands to facilitate management of wild wolves.

Question 5. The Service identified coyote hybridization as an existential threat for the red wolf. Does the Service have a plan for limiting hybridization in the wild? If so, please provide it to the committee. If not, does the Service intend to generate such a plan prior to additional releases of red wolves into the wild?

Answer. The Red Wolf Adaptive Management Plan (https://www.fws.gov/redwolf/Images/20130211_RWAMP_2013-2015.pdf) was developed for the express purpose of managing coyote genetic introgression into the red wolf population. Its components include monitoring of the population to identify hybrid animals for management action. Potential actions include removing hybrid animals from the population or sterilizing and releasing them for use as placeholder animals, which continue to hold territorial space until that animal can be replaced naturally or by management actions. The plan also includes an active research effort to assess the effectiveness of management actions so that adjustments can be made as needed. Scientific research has shown the plan to be effective in limiting hybridization.

Question 6. Director Sandoval from the New Mexico Department of Game and Fish stated that the biggest contributing factor to the lack of success in Mexican wolf recovery efforts is the Service's unwillingness to cooperate with the states. How does the Service intend to repair its poor relationship with states involved in wolf recovery efforts? Does the Service intend to involve states in its revised Mexican Wolf recovery plan?

Answer. Throughout the initial efforts to reintroduce Mexican wolves, the Service has cooperated with the states of Arizona and New Mexico. Although the New Mexico Department of Game and Fish withdrew as a partner in the Mexican Wolf Recovery Program in 2011, the Service has continued to encourage them to reengage and has continued to provide information to keep them up-to-date on the program. New Mexico Department of Game and Fish supports the Service's efforts to revise the 1982 Mexican Wolf Recovery Plan. In December 2015, the Service reinitiated efforts to develop a revised recovery plan for the Mexican wolf based on the best available science. We have convened workshops and worked collaboratively with representatives of the states of Arizona, Colorado, New Mexico, and Utah; Federal agencies in Mexico; the White Mountain Apache Tribe; the Forest Service; and independent scientists from both countries to review the biological information that will inform the development of the revised recovery plan. All four states have been extensively involved in recovery planning workshops, including biologists and legal counsel from the New Mexico Department of Game and Fish. Since December 2015, we convened five recovery-planning workshops in the United States and Mexico; the four states participated in all five workshops, which are facilitated by the International Union for Conservation of Nature's (IUCN) Conservation Breeding Specialist Group. In addition, the New Mexico Department of Game and Fish participated as a Cooperating Agency in the Service's development of an Environmental Impact Statement (EIS) for the revision to the regulations for the nonessential experimental population of the Mexican wolf. That EIS was completed in November 2015.

Question 7. Does the Service intend to introduce Mexican wolves into Colorado and Utah? If so, how would such introductions be justified when the Service itself identified only the southwest corner of New Mexico and southeast Arizona as the northern extent of its historic range?

Answer. We have no plans to introduce Mexican wolves into Utah or Colorado. Only as a final resort, after full consideration of options south of I–40, would we consider looking north.

Question 8. The OIG found that a Mexican wolf field team coordinator and her employees deliberately interfered in livestock predation investigations. Please provide the committee with an update about steps that the Service has taken to discipline and/or fire this employee. Please also provide the committee with information about how the Service plans to ensure similar interferences in predation investigations do not occur in the future.

Answer. In 2013, prior to the OIG inquiry, the Service recognized that the Mexican Wolf Recovery Program was not performing adequately in some key functions pertaining to field operations and made decisive management changes to address those shortcomings, including personnel moves and hiring additional field staff. In order to resolve this, the Service reassigned the former Field Projects Coordinator to an administrative position based in Tucson, Arizona in August 2013. The current Field Projects Coordinator is now located in the Albuquerque, New Mexico office. The Field Projects Coordinator position now oversees not only the field operations in the current Mexican wolf population area, but also in the areas where the population is expected to expand, in accordance with the revised experimental population 10(j) Rule. This new organization will facilitate consistent management of all field operations under the Field Projects Coordinator as the Mexican wolf population expands. In 2015, the Service also hired an Interagency Field Team (IFT) Leader, who is located in the Alpine, Arizona IFT Office. This position directly supervises the Service staff in the IFT Office and reports to the Field Projects Coordinator. This position also coordinates directly with the other IFT staff and the local livestock producers, landowners, and communities to improve communications with stakeholders.

Investigations of livestock depredations are typically conducted by staff of the U.S. Department of Agriculture-Wildlife Services (USDA-Wildlife Services), who determine the cause of death. The Service is involved only if asked by USDA-Wildlife Services to assist. If the USDA-Wildlife Services confirms the cause of death as a wolf depredation, the Service and jurisdictional IFT lead (state or tribe) review radio telemetry data and recent observations to determine which wolves were in the area at the time of the depredation. This information enables the IFT to manage the situation to deter additional depredations using a suite of management actions including hazing, trapping and translocation, and removal of wolves from the wild if necessary to stop chronic depredations.

Question 9. Is there evidence of hybridization of the Mexican wolf with domesticated dogs? How will the Service ensure that hybridization of the Mexican wolf will not occur with dogs, coyotes, and other wolf species? Please provide all genetic testing results that the Service has performed on Mexican wolves.

Answer. The Service monitors the genetics of the wild Mexican wolf population by taking blood samples from every canid handled, as well as through the opportunistic collection and testing of hair and scat from some areas. All samples are sent to the Laboratory for Ecological, Evolutionary, and Conservation Genetics at the University of Idaho for species confirmation, meaning the samples are analyzed to determine if they are from a pure Mexican wolf, pure coyote, pure dog, or hybrid. The Laboratory also uses DNA analyses to determine the parentage of the animal.

In the Mexican wolf experimental population, hybridization is a rare event. Three confirmed hybridization events between Mexican wolves and dogs have been documented since the reintroduction project began in 1998. In the first two cases, hybrid litters were humanely euthanized. In the third case, four of five pups were humanely euthanized; the fifth pup, previously observed by project personnel but not captured, has not been located and its status is unknown (BRWRA Monthly Project Updates, June 24, 2011, https://www.fws.gov/southwest/es/mexicanwolf/CEBRWRA.cfm). This pup likely died based on the age of the pup and the circumstances associated with this animal (after June of that year, the adult female was observed several times traveling alone, and the IFT was unable to document the survival of the pup. The pup was at an age (1–2 months) that would have made survival on its own highly unlikely. In July, the IFT captured and placed the female in temporary holding in an attempt to observe or capture the pup; the pup was not observed during this time frame or before the female was removed from the wild in December 2011, further indicating the pup had not survived).

No hybridization between Mexican wolves and coyotes has been confirmed through our genetic monitoring of coyotes, wolves, and dogs. Our response to the three hybridization events with dogs has negated potential impacts to the genetic integrity of the experimental population from these events. Moreover, the likelihood of hybrid animals surviving, or having detectable impacts on wolf population genetics or viability, is low due to aspects of wolf sociality and fertility cycles.

All genetic testing results for Mexican wolves in the wild population are included as an attachment. It should be noted, however, that the Service does not conduct these analyses. Samples are sent to, and the analyses are conducted independently by, the Laboratory for Ecological, Evolutionary and Conservation Genetics at the University of Idaho.

Question 10. Please provide the total number of captive-released Mexican wolves that are alive in captivity and also the total number of captive-released Mexican wolves that are alive in the wild. What is the maximum possible number of Mexican wolves, including observed first-year pups, that could be living in the wild today? Why did the Service stop reporting this graphically in annual IFT reports after 2002?

Answer. As of July 2016, there were four Mexican wolves that were born in captivity, released to the wild, and now live again in captivity. They are M863, M1049, M1133, and F1046.

Our best estimate is that there was a minimum of 97 wolves in the wild as of December 31, 2015.

All of the wolves alive in the wild at the end of 2015 were born in the wild. Since then, we have cross-fostered six pups from captivity to the wild. These captive-born pups were removed from their natal dens in captivity at less than 10 days old, and two-each were placed into three similarly aged litters in the wild. If successful, cross-fostering allows for captive-born pups to be placed into wild dens and be raised by experienced wolves in the wild. Of the six captive pups placed into wild dens in 2016, we have confirmed at least two of them have survived. The IFT is continuing efforts to confirm the survival of additional cross-fostered pups.

Mortality occurs throughout the year and is particularly high on young pups, so while we have documented reproduction, we will not have a complete idea of how many of these young pups and adults have died until the annual population survey conducted in the winter. Annual surveys are conducted in the winter because it is when the population is experiencing the least amount of natural fluctuation (i.e. in the spring the population increases dramatically with the birth of new pups and declines throughout the summer and fall as mortality is particularly high on young pups). Thus, we summarize the total number of wolves at a fairly static or consistent time of year. This allows us to establish comparable year-to-year trends at a time of year that accounts for most mortality and survival of young pups.

The "maximum" population reported in 2002 represented the minimum documented population plus the addition of "fate-unknown wolves" (previously radio collared, but the radio collar failed and the signal was lost). Some of the fate-unknown animals were likely dead, while others could be alive, and still others were known to be alive but could no longer be monitored via telemetry due to collar failure. Thus, this "maximum" number was confusing and represents a combination of possible fates (likely dead, likely alive, etc.) for wolves. Further, the longer an animal is considered fate-unknown, the more likely it is that the animal is dead.

After 2002, the IFT improved methods for counting wolves in the wild. The current technique includes the use of helicopters and trail cameras to count wolves. Through these methods, the IFT was able to obtain evidence of the fate-unknown animals that were alive with a failed collar, and those that were likely dead. Thus, it was no longer necessary to generate a maximum population estimate based on fate-unknown animals. Further, the minimum population count represents the best trend in the population without the vagaries of fate-unknown animals accumulating through many years of a project. The IFT continues to expend significant resources counting the population, inclusive of: (1) fate-unknown animals that are determined to be alive; (2) uncollared animals that are associated with a collared pack; and (3) uncollared packs and single animals. The minimum population count, however, is a minimum and generally under-represents the true population by a small proportion of animals.

Question 11. What is the average annual number of Mexican wolves that permanently disappear? Under what criteria does the Service presume a missing Mexican wolf is dead? Are Mexican wolves that are missing and documented as "presumed dead" tracked, tallied and compared against known mortalities? If not, please explain why.

Answer. In general, the project has 2–3 radio-collared animals each year that are fate-unknown (radio-collared animals that have not been documented through radio telemetry or visual evidence for 3 months) and presumed dead. We base the presumption of death on loss of radio contact with no indication of transmitter failure, if subsequent bi-weekly telemetry flights and bi-monthly search flights failed to locate the animal over a large area, and if the animal failed to be observed for at least

3 months through intensive monitoring efforts. These numbers are tracked relative to an overall failure rate (inclusive of wolves that are determined to be dead; fate-unknown and presumed dead; and removed from the wild) based on radio collar data and reported in each annual report since 2007. There is some uncertainty associated with whether or not these wolves have died, and there is complete uncertainty about the cause of death, so the number of mortalities does not include fate-unknown animals, but represents a minimum number of documented mortalities based on actual carcasses that are found.

Question 12. How many confirmed wild-born, first-year Mexican wolf pups have been observed since 1998? How many of those pups died or disappeared within the first year of life? What percentage of those pups are still alive today?

Answer. For the period covering 1998–2015, 383 pups have been documented as wild-born. Of those, for the period covering 2005 to 2015, we have documented 323 pups, approximately 103 of which reached adulthood; and many of those have since died during adulthood. The project estimates that on average, 54 percent of the pups that are born die prior to reaching 1 year of age (consistent with most mammal populations). Much of this mortality occurs during the first 30 days of life, and prior to when the IFT counts pups. Overall, roughly 32 percent of the pups we do count are expected to reach adulthood, and of those animals, 19 percent are expected to die during each year of adulthood. The 2015 end-of-year minimum population in the wild primarily consisted of wild-born wolves, ranging in age from "young of the year" (less than 1 year old) to 10 years old (two wolves were over 10 years old).

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The following document was submitted as an attachment to Mr. Guertin's response to Chairman Gohmert's Question 9. This document is part of the hearing record and is being retained in the Committee's official files:

Table—Mexican Wolf Genetic Results as of October 2016

Questions Submitted by Rep. Dingell

Question 1. On September 29, 2016, Judge Terrence Boyle in the Eastern District of North Carolina issued a preliminary injunction preventing the Fish and Wildlife Service from removing wolves from the landscape unless there is a showing of danger to people or property. In his order, Judge Boyle admonished the FWS regarding its duty to conserve red wolves in the wild. In light of this decision, will the FWS revisit its recent proposal on changes to red wolf management?

Answer. No. The Service is committed to recovering the red wolf. We are moving forward with the implementation of a series of actions announced in September 2016 to secure the captive and wild red wolf populations. We believe this strategy is scientifically sound and will move us toward recovery.

Question 2. What are your management plans from now until the fall of 2017 for the current wild red wolf population? Do you intend to remove wolves from Pocosin Lakes NWR to Dare County?

Answer. We do not anticipate removing red wolves from private or public lands due to Judge Boyle's preliminary injunction. The Service will only authorize take of red wolves when there is a threat to human safety or to the safety of livestock or pets as dictated by Judge Boyle's order. When the preliminary injunction is lifted, the Service will resume managing red wolves in accordance with the existing 1995 rule and its proposed course of action to refocus red wolf recovery actions on Federal lands.

Question 3. How many red wolves are currently being held in captivity? How long have they been held?

Answer. Currently, there are approximately 225 red wolves in over 40 captive breeding facilities around the country. Red wolves have been held and bred in captivity at over 40 zoos and institutions around the country since 1969.

Question 4. How many red wolves have been removed from the wild from 2014–2016?

Answer. Since 2014, the Service removed nine wolves from the five-county nonessential, experimental population area in eastern North Carolina.

Questions Submitted by Rep. Newhouse

Question 1. The gray wolf is an important issue to my district in Central Washington, where as you said the gray wolf has recently expanded its range. I have been frustrated by the lack of movement by the Fish & Wildlife Service to delist the gray wolf in the lower 48 states. In your testimony you state: "Our goal, consistent with our legal mandates, is to recover wolves—so that they are no longer threatened or endangered—and return management of those recovered wolves to the states." However, since issuing a proposed rule to delist the gray wolf in 2013, the Service has not taken further action on the rule, which you state is due to several court decisions vacating the delisting decision. What is the status of the Federal Government's appeal in those cases? Additionally, if your goal is to "return management of those recovered wolves to the states," what steps can the Service take in the interim to help states prepare to manage their own wolf populations?

Answer. The Service has worked tirelessly to delist recovered populations of gray wolves and return management to the states. For nearly a decade now, these decisions have consistently been met with legal challenges. While the Northern Rocky Mountain population of gray wolves (except for wolves in Wyoming) has been delisted and under state management since 2012, the Service's 2011 and 2012 determinations delisting the recovered wolves in Wyoming and the recovered population in the Western Great Lakes (WGL), were vacated by separate D.C. District Court judges in 2014, reinstating Endangered Species Act protections for these wolves. The June 13, 2013, rule to which you refer was premised upon wolves in Wyoming and the WGL being both recovered and delisted. At the Service's recommendation the Department of Justice is actively appealing both of the 2014 court decisions and recently participated in oral arguments on September 23 and October 18, 2016. We are now awaiting decisions from the court.

The state wildlife agencies in Wyoming, Minnesota, Wisconsin and Michigan have more than sufficient experience managing wolf populations within their borders, as each was able to successfully implement their respective wolf management programs prior to the court reinstating Federal protections for wolves in their states. The Washington and Oregon wildlife agencies are currently actively managing the recovered and delisted wolf populations within the eastern one-third of their states and the Service is coordinating closely with these agencies and California Department of Fish and Wildlife to provide technical assistance, including identifying nonlethal measures (e.g., physical barriers, deployment of visual and auditory devices, and active hazing), to help prevent gray wolf depredations on livestock where wolves are federally protected. In addition, the Service administers the Wolf Livestock Demonstration Project Grant Program to provide grants to states and tribes to support livestock producers conducting proactive, nonlethal activities to reduce the risk of livestock loss due to predation by wolves and to compensate livestock producers, as appropriate, for livestock losses due to such predation. Washington was awarded funds in Fiscal Year 2015 and has been selected to receive funds for Fiscal Year 2016.

Question 2. I am concerned that the Service is not treating the appeals process with enough urgency and is using the court decisions as a cop-out to not move forward with the 2013 proposed rule, which is strongly opposed by many environmental organizations. The proposed delisting rule states the Service "evaluated the classification status of gray wolves currently listed in the contiguous United States and Mexico under the Endangered Species Act of 1973" and found the "best available scientific and commercial information indicates that the currently listed entity is not a valid species under the Act." Outside of appeals, what actions are you taking to ensure that sound science is being followed and that recovered species are being delisted from ESA?

Answer. As you mention, the Service is actively participating in the appeals process and we anticipate receiving the court decisions in 2017. If we prevail in these cases, the Service intends to take action on our 2013 proposal, because we find that gray wolves in the lower 48 states, except for the Mexican wolf subspecies in the Southwest, are recovered and no longer warrant protection under the ESA. In the meantime, we find ourselves at the mercy of the courts with respect to the legal status of gray wolves in the lower 48 states under the ESA.

The Service continues to make improvements to the implementation of the ESA. However, regardless of what we can do to improve implementation of the ESA, the fact is that recovery is not a simple or fast process. There will always be complicating biological and human factors to contend with. Recovery of listed species is often a lengthy, intricate process, reflective of the long periods of time that the species faced impacts leading to listing. As our world continues to evolve, climate

change impacts are felt, and our economy and populations grow, species will face growing threats that will impact the recovery process. With limited resources available, it is important for the Service to balance multiple mandates under the ESA, including preventing species from going extinct and bringing them off the list through recovery efforts.

Question 3. Recently, the Profanity Peak wolf pack in eastern Washington has drawn considerable attention. Since July 8, the Washington Department of Fish & Wildlife documented at least 13 depredation events on livestock, including 8 confirmed and 5 probable depredations. The Profanity Peak pack is located in the eastern-third of Washington State, where the wolf is not federally listed. Washington Fish & Wildlife decided to initiate a lethal removal effort of the pack in August and has since removed a total of six wolves. Can you discuss how the U.S. Fish & Wildlife Service works with state-level wildlife management agencies to manage wolves located in areas that are not under Federal management? How is the Fish & Wildlife Service working with individual state agencies to prevent wildlife and livestock depredations?

Answer. State wildlife agencies manage gray wolf populations that are no longer listed under the Endangered Species Act due to successful recovery efforts, including those in Montana, Idaho, eastern Washington and Oregon, and north central Utah. The Service's role in these areas has been to provide technical assistance to states when requested and to distribute Federal funds to prevent livestock depredations and compensate for livestock losses. The Service awards prevention and compensation funding to states and tribes through the Wolf Livestock Demonstration Project Grant Program, as described in P.L. 111–11. In 2015 the Service awarded $900,000 in grants under this program distributed among eight states and the White Mountain Apache Tribe. In the coterminous United States where gray wolves are still listed as endangered, outside of Wyoming where wolves are listed as a nonessential experimental population, the Service's assistance to state agencies in managing wolves is currently limited to nonlethal measures.

In federally-listed areas, the Service works closely with state fish and wildlife agencies to prevent livestock depredations. Specifically in Washington, the Service participates in the State's Wolf Advisory Group meetings and also meets with Washington Department of Fish and Wildlife (WDFW) leadership and USDA APHIS Wildlife Services on how depredation investigations will be handled in the listed portion of the state. In FY2016, the Service's Washington Fish and Wildlife Office obligated $65,000 from its Recovery budget to help WDFW provide technical assistance to landowners. This was in addition to the approximately $100,000 WDFW received from the Service for livestock depredation response efforts in FY2016. In the listed portion of Washington State, individuals can use nonlethal munitions, including cracker shells and rubber bullets, to haze wolves near livestock; the use of these tools must be done in coordination with WDFW and Federal authorities. The Service continues to work closely with landowners and WDFW and is taking steps to increase our capacity to provide assistance with wolf deterrents and nonlethal measures aimed at reducing wolf-livestock conflicts in Washington.

Other examples of the Service's works with state-level wildlife management agencies includes:

- In the listed portion of Oregon, the Service has authorized active hazing of wolves near livestock, including the use of rubber bullets and other management techniques that are "not reasonably anticipated to result in death or permanent disabling of the animal" in helping prevent depredation and other conflicts.
- In Minnesota, where gray wolves are listed as a threatened species, the Service has promulgated a special rule under section 4(d) of the ESA, which allows state and Federal Government agents to relocate or remove wolves that are verified to have depredated on livestock.

The Service works with each state to authorize and implement a state management plan that meets the state's needs. We understand that each state has unique circumstances and we work with our state partners on a state-by-state basis to address their specific needs.

Question 4. Proponents of keeping a Federal ESA listing for the gray wolf often argue that the wolf plays a critical role in "ecosystem balance." However, one issue that is drawing increased attention is the impact the wolf has had on the Shiras Moose. When wolves were reintroduced in 1995 in the Northern Rocky Mountains, Federal estimates predicted the impact to these moose populations would be 7 percent to 13 percent. However, recent reports and studies have found that Shiras

Moose populations have declined by almost 90 percent. What steps has the Service taken to address this growing problem and how do you plan to continue protecting the wolf, while also ensuring these moose populations do not decline further?

Answer. Declines of the Shiras moose (moose) across its entire range, from Minnesota to the Northern Rockies, have been well studied over the past decade. The reasons for the decline of the moose are primarily loss of habitat and impacts associated with climate change (leading to parasite load issues directly impacting health and vigor), in conjunction with the secondary impact of predation. For example, research has demonstrated substantial declines in moose in many local areas where wolves do not exist and predation is not an issue. Consequently, the best available science does not support a cause-effect relationship between wolf numbers and decline (or increase) of Shiras moose in Wyoming.

In Wyoming, and the Jackson/Yellowstone area in particular, nutritional deficiencies and habitat loss have largely been responsible for the decline of the moose. Subsequently, wolves have been able to exploit vulnerable Shiras moose in this area and, thus, contributed to the decline. However, predation by wolves has been opportunistic and not the primary cause.

Delisting has allowed significant state flexibility in its management of the gray wolf population in the Northern Rocky Mountains. While the delisting rule was vacated for gray wolves in Wyoming, that case is on appeal. It remains the Service's view that the entire Northern Rocky Mountains gray wolf population is biologically recovered and therefore management of the entire population should belong to the states. We remain confident that the states will be successful in achieving a reasonable balance between the needs of a recovered wolf population and other public needs.

Question 5. In a state like Washington, with split management of gray wolves and a state plan with recovery goals in excess of Federal requirements, could a Section 4d exemption possibly help to add consistency and ensure that wolf populations across the state are all benefiting from successful state management?

Answer. The WDFW is currently managing gray wolves in the eastern one-third of the state, which was delisted along with the rest of the Northern Rocky Mountain gray wolf population (except for Wyoming) in 2012. The western two-thirds of the state and any wolves that may occur there are part of the broader gray wolf listing which has a legal status of endangered under the ESA. When a species is listed as endangered, all the take prohibitions (section 9) of the ESA apply. Section 4(d) does allow the Service to issue a rule that establishes specific prohibitions and exceptions that are tailored to the specific conservation needs of threatened species. Section 4(d) of the ESA applies only to species listed as threatened; this authority does not apply to species listed as endangered, such as the gray wolf.

While a section 4(d) rule is not currently an option for consideration, the Service is actively working with WDFW and providing technical expertise regarding appropriate nonlethal measures (e.g., physical barriers, deployment of visual and auditory devices, and active hazing) that may be used to help prevent depredation on livestock within the state. In addition, the Service administers the Wolf Livestock Demonstration Project Grant Program to provide grants to states and tribes to support livestock producers conducting proactive, nonlethal activities to reduce the risk of livestock loss due to predation by wolves and to compensate livestock producers, as appropriate, for livestock losses due to such predation. Washington was awarded funds in Fiscal Year 2015 and has been selected to receive funds for Fiscal Year 2016.

Questions Submitted by Rep. Pearce

Question 1. The Department of the Interior (DOI) Inspector General (IG) Report from June 29, 2016 states on page 8 that the IFT coordinator of the Mexican Gray Wolf Recovery Program (MGWRP) did not know the difference between an Alaskan Gray Wolf and a Mexican Gray Wolf, despite the significant differences.

a. Why did the Fish and Wildlife Service (FWS) hire someone that could not even make this simple distinction?

Answer. The statement in the OIG Report is: "The former IFT member felt that the former IFT coordinator, who had worked with wolves in Alaska, had been unprepared to assume the role of coordinator because she did not understand the differences between Alaskan and Mexican wolves, but then did not listen to those who did understand and offered to help her." The context of this statement was to note that there are management differences between gray wolves in Alaska (where the

Former IFT Coordinator managed them on a National Wildlife Refuge), and Mexican wolves on working landscapes in the Southwest.

b. Is it a common practice for the FWS to hire coordinators that are not familiar with the species they are tasked with recovering?

Answer. See response above.

Question 2. In Director Ashe's letter addressed to me on September 2, 2016 he claims that the current IFT coordinator spends roughly "50 percent" of his time "working on issues specifically related to Grant and Catron counties." However, in the travel logs sent by the FWS to my office it appears the IFT coordinator only made three visits to New Mexico from January 2014 through August 2016. He also made 49 trips to Arizona.

a. Could you explain why he spends so much time in Arizona and not New Mexico?

Answer. The Mexican Wolf IFT office has been located in Alpine, Arizona since the reintroduction program began in 1998. The Field Projects Coordinator (termed above as IFT Coordinator) usually stays in a hotel in Alpine, Arizona when he travels to work out of the IFT office. The Field Projects Coordinator's official travel location, therefore, is accurately shown as Alpine, Arizona. From the Alpine IFT office (which is located near the border of Arizona and New Mexico), the IFT manages wolves in both Arizona and New Mexico (although as of this year, the Arizona Game and Fish Department conducts most of the wolf management in Arizona out of an office in Pinetop, Arizona). The Arizona Game and Fish Department staff conducts most of the management of Mexican wolves in Arizona, and, following the departure of the New Mexico Department of Game and Fish Department from the recovery program in 2011, Service employees conduct most of the management of Mexican wolves in New Mexico. The Field Projects Coordinator spends additional time traveling to sites in New Mexico within a single day, which does not require travel expenses. The Coordinator also spends time talking to landowners, livestock producers, and others in New Mexico regarding Mexican wolf management issues by phone.

b. How does the coordinator travel from Albuquerque, where he's stationed, to Arizona?

Answer. The IFT Coordinator travels to the Alpine IFT Field Office and conducts field work from a government vehicle.

c. When he travels to Arizona, does he stay overnight? If so, please provide logs for overnight stay.

Answer. In general, the Field Projects Coordinator stays overnight when he travels to the Alpine Field Office. The travel log included in the Director's September 2, 2016 response, which was derived from the government's Concur travel program, provided the dates on which the IFT Field Projects Coordinator stayed overnight in Arizona. The travel log is included as an attachment.

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The following document was submitted as an attachment to Mr. Guertin's response to Rep. Pearce's Question 2c. This document is part of the hearing record and is being retained in the Committee's official files:

Table—Log of Current IFT Coordinator Travel

Questions Submitted by Sen. Tillis

Question 1. A report on the Red Wolf Program recently released by the Office of the Inspector General found that the Fish and Wildlife Service violated its rule by releasing 132 wolves into the wild between 1987 and 2013 when the rule had only provided for the release of 12 wolves. Furthermore, many of these wolves were released on private lands without permission from the landowners, something the Fish and Wildlife Service maintained it was not going to do.

a. Normally, if the shoe were on the other foot and it was a private landowner violating breaking a law or Federal regulation, there would be some sort of recourse.

Answer. In 2014, the Service acknowledged it made some mistakes in its management of the Red Wolf Recovery Program. In those past instances, the Service only released wolves on private lands with agreements—either written or verbal—to do so. Since then, the Service has managed the nonessential, experimental population

in eastern North Carolina in accordance with the 1995 rule (50 C.F.R. 17.84(c)). The Service is no longer releasing wolves on private lands.

b. What action did Fish and Wildlife take to correct this clear and obvious violation of its own rules?

Answer. Over the past 3 years, the Service has conducted comprehensive reviews of the Red Wolf Recovery Program, ensured the program is in compliance with enacted rules, and reorganized the program to avoid future deviations from the existing rules. The Service also is complying with Judge Boyle's order.

Question 2. As Fish and Wildlife attempted to manage its nonexperimental population of wolves and secure that population on Federal lands, the Agency made the promise that it would remove Red Wolves found to be on private lands at the landowners' request. Additionally, the Fish and Wildlife Service has stated that it would issue private take permits to landowners for the landowners to trap the wolves to be returned to the Agency.

a. How many landowners made requests to the Fish and Wildlife Service to have wolves removed from private lands?

Answer. The Service has received six requests to remove red wolves from private lands as of October 2016. In previous years, the number of these requests has been less than 10 per year with the exception of 2014 when the Service received 405 requests. In 2014, the Service received several petitions with multiple signatures requesting removal of red wolves from private properties. Upon contacting each requestor, the Service determined that many of the landowners had no evidence that red wolves were on their property. Several requestors also indicated that they were unaware of the purpose of the petitions.

b. How many special take permits have been applied for?

Answer. The Service does not issue trapping permits to private landowners for the removal of red wolves since the agency or agents of the Service, including private trappers, conducts the trapping operations. When trapping efforts are abandoned, the Service may issue an authorization to take a red wolf by lethal means.

c. How many special take permits have been issued by the Agency?

Answer. As of October 2016, the Service has issued five lethal take authorizations affecting three properties.

Question 3. Mr. Myers' mentions in his testimony that the flooding at the Pocosin Lakes Wildlife Refuge may have adversely impacted its suitability to support the wild wolf population.

a. What is the condition of that refuge now given the ongoing hydrology restoration efforts?

Answer. The Service is taking a science-based approach working with hydrologists to restore the natural hydrology and rewetting pocosin peat soils at the Pocosin National Wildlife Refuge (Refuge). Since the Refuge was established in 1991, the Service has been working to restore the pocosin peat soils in three of the most significantly ditched and drained areas affecting nearly a third of the Refuge's 110,107 acres. Restoration activities include raising the elevation of existing berms and installing flashboard riser water control structures in strategic locations. The Service will then use this infrastructure to stop the artificial drainage of rainwater from the peat soils through the ditch system. The new infrastructure enables the Refuge to rewet historically drained peatlands and return lands to a natural, seasonally saturated condition. Within the restored area, low-lying areas where standing water may be present seasonally are expected and may be acceptable for foraging and hunting by terrestrial wildlife, including red wolves. The flooding recently experienced on the Refuge and adjacent private lands is the result of excessive amounts of rain falling on lands already saturated by repeated tropical events including Hurricane Matthew aggravating conditions in ditches, creeks, and sounds, already full from previous rain events. No management strategy would prevent localized flooding on or off the Refuge under these conditions. We are working diligently with adjacent landowners to ensure a better understanding of the hydrology restoration effort and to identify opportunities of mutual interest that have great potential to improve drainage conditions for these landowners.

b. How many wolves are currently living on the Refuge?

Answer. Five adult red wolves are known to use portions of the Refuge. We are uncertain as to the number of pups potentially born in 2015 or 2016 that may use portions of the Refuge at this time.

Question 4. It is my understanding that the Fish and Wildlife Service can account for less than 30 wild wolves with collars and have estimated that there are about 15 more wolves whose whereabouts are unknown.

a. What steps will the Agency make to recover these 15 "missing" wolves?

Answer. The current wild population estimate is approximately 45 wolves, including the known number of animals (28 radio collared wolves) and a percentage of the number of observed puppies born this spring that were PIT tagged but not collared because they were too small. The exact number of these young animals that survive their first year of life will not be known until they are old enough to be safely trapped. However, trapping cannot occur until the existing Federal court injunction has been lifted. Additionally, there are a small, but unknown, number of animals that avoid being trapped and are undetected on the landscape, as well as animals that inhabit lands to which we do not have access.

b. If the Agency already has difficulty tracking the collared wolves that are out there, how can I and private landowners be assured that a wolves will be accurately tracked and kept off private lands in any future non-experimental population site that are created?

Answer. The Service is able to closely monitor the wild population when its biologists can trap and fit adult red wolves with tracking collars. In recent years, reduced access to private lands has limited the Agency's ability to find red wolf litters and conduct trapping operations that would allow for a more accurate account of the wild population and movement of red wolves on the landscape. Additionally, the recent injunction has further limited the Service's ability to trap wolves for monitoring activities.

Mr. GOHMERT. Thank you.

At this time, Mr. Myers, you are recognized for 5 minutes.

STATEMENT OF GORDON MYERS, EXECUTIVE DIRECTOR, NORTH CAROLINA WILDLIFE RESOURCES COMMISSION, RALEIGH, NORTH CAROLINA

Mr. MYERS. Chairman Gohmert, Ranking Member Dingell, and members of the subcommittee, thank you for the opportunity to come before you today to provide testimony regarding red wolf management in North Carolina. Wolf management in North Carolina is currently at a key decision point.

Let me first take you back four decades ago, when the U.S. Fish and Wildlife Service redirected its efforts to remove red wolves from the wild, from protecting animals in the wild, to a planned removal of the species from the wild, thus establishing the species survival captive breeding program. This extreme decision to forcibly extirpate wolves highlighted a clear and present danger of extinction, due to hybridization with coyotes. These steps were taken with hopes of identifying a future reintroduction site.

In 1986, the Service promulgated rules that authorized taking wolves from the captive breeding program to establish a reintroduction experiment on Federal lands in northeastern North Carolina. The location was selected for the following key reasons: it met the recovery plan goal of abundant and Federal lands with habitat and prey-based characteristics, presumed to be suitable for red wolves; the surrounding area had a relatively low human population; and coyotes were practically non-existent on the landscape, which supported the recovery objective that the population be self-sustaining.

The reintroduction was designated a nonessential experimental population in accordance with section 10(j) of the Endangered Species Act. It was nonessential because the red wolf was secure

in the captive breeding program. Because of public comments about possible adverse impacts to the species by removing wolves from captivity, the Service's final rule stated they would limit their releases to no more than 12 wolves.

However, according to Service records, 165 wolves had been released between 1986 and 2014, of which 130 came from the captive breeding program and 64 were released onto private lands, an action that was also not authorized in the Service's rules, nor is it congruent with the goal of managing red wolves on Federal lands.

In the 29-year period since the reintroduction, active management of red wolf habitat has been minimal. In fact, hydrology manipulation at Pocosin Lakes National Wildlife Refuge may very well have adversely impacted the use of those lands by wolves, the wolves that persisted predominantly on private lands, which is not in harmony with achieving the explicit goal to manage the red wolf experiment on Federal lands.

Under the rules that applied to the red wolf reintroduction, the Service must remove unwanted wolves from private land upon which the landowner requests. The Commission has recently worked with the Service to try to fulfill this requirement. However, most efforts have proven ineffective, largely due to the tremendous challenges of capturing wolves and their propensity to quickly return to those private lands after being released again on Federal lands. It is essentially a revolving door.

On September 12, 2016, the Service issued a new call to action as it announced recommended decisions in response to an ongoing evaluation of the red wolf recovery program. The Service's decision memorandum states the wild red wolf population is projected to crash in as few as 8 years. It further concedes the species is currently not secure in captivity, and recommends the captive breeding population be increased to approximately 400 animals with a minimum of 52 breeding pairs.

The Service has identified this change as its highest priority for the red wolf recovery program. As of January 1, 2015, the captive population contained 207 wolves and 29 breeding pairs, which is far short of identified needs. The Service's recommendation to maintain a small population of intensively-managed wolves on Federal lands in Dare County is inconsistent with the captive breeding population objectives.

Today, nearly 30 years after the first reintroductions, and despite tubal ligations and vasectomies of coyotes, releases of 165 wolves, including 58 in Dare County, there is only one known wolf pack occupying Federal lands. Meanwhile, in the 10-year period from 2002 to 2012, reported numbers of coyotes trapped statewide has increased 2,600 percent in North Carolina. The degree of intensive management required to recapture wolves that leave Federal lands or to address the perpetual threat of hybridization with coyotes would encumber the critical and limited financial and human resources necessary to expand the capacity within the captive breeding program.

The Commission believes there is once again a clear and present danger of species extinction, and the best decision to safeguard the red wolf is to capture the remaining wolves from northeastern North Carolina, safely secure them in a captive breeding program,

and redirect available resources toward increasing the capacity of those facilities while sorting out the red wolf taxonomy.

Once again, thank you very much for this opportunity to appear here today.

[The prepared statement of Mr. Myers follows:]

PREPARED STATEMENT OF GORDON MYERS, EXECUTIVE DIRECTOR, NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

INTRODUCTION

Chairman Gohmert, Ranking Member Dingell, and members of the subcommittee, I am Gordon Myers, Executive Director of the North Carolina Wildlife Resources Commission (Commission), a state agency whose mission is to conserve North Carolina's wildlife resources and their habitats and provide programs and opportunities that allow hunters, anglers, boaters and other outdoor enthusiasts to enjoy wildlife-associated recreation. I am grateful for the opportunity to come before you to provide testimony regarding red wolf management in the state of North Carolina.

BACKGROUND

During the fall of 1973, the U.S. Fish and Wildlife Service (Service) established a recovery program for the red wolf (*Canis rufus*) based on belief that a pure population of red wolves still existed in southeast Texas and adjacent areas of Louisiana. Field work revealed extensive hybridization with coyotes across the limited remaining red wolf range. Hybridization with coyotes threatened the continued existence of the species. Therefore, all recovery efforts were redirected from protecting animals in the wild to a planned extirpation of the species from the wild. This extreme decision to extirpate red wolves from the wild highlighted the immediate and significant threat of inter-specific breeding with coyotes. The removal of the species from the wild was accompanied by a long-range objective to eventually return the species to areas of its historic range.

Between the fall of 1973 and July 1980, the Service captured and examined more than 400 wild canids from which only 14 animals became the founding stock for the Red Wolf Species Survival Captive Breeding Program (SSP). Red wolves were declared extinct in the wild in 1980. Today, 12 founder lines are represented in the wild and captive populations. As of January 1, 2015 the SSP included 207 wolves and 44 institutions.

After the species was believed to be safeguarded in captivity, the Service conducted small-scale reintroduction experiments in 1976 and 1978. The Service then released mated pairs of red wolves onto Bulls Island, a 4,909-acre component of the Cape Remain National Wildlife Refuge near Charleston, South Carolina. The results of these releases indicated potential feasibility of establishing adult wild-caught red wolves in selected habitats in the wild.

SETTING UP THE EXPERIMENT IN NORTH CAROLINA

In 1986 the Service promulgated rules that would use wolves sourced from the SSP captive breeding program to establish a reintroduction experiment at Alligator River National Wildlife Refuge (ARNWR) located in Dare and Tyrrell Counties, North Carolina.

ARNWR was selected as an experimental reintroduction site for the following key reasons:

1. Abundance of Federal lands with habitat and prey base characteristics presumed to be suitable for red wolves
2. Relatively low human population
3. Absence of coyotes on the landscape

The final special rule published in the Federal Register on November 19, 1986 provided guidelines and sideboards for the experimental reintroduction. Those rules designated the red wolf reintroduction as a nonessential experimental population (NEP) in accordance with section 10(j) of the Endangered Species Act (ESA). Under the ESA, the Secretary of the Department of the Interior is required to determine whether or not the population is essential to the continued existence the species. In the case of red wolf, it was determined that despite extirpation from the wild, the red wolf was secure in the SSP captive breeding program. Notably, in response to public comments expressing concern about potential adverse impacts resulting from removing animals from the SSP captive breeding program and introducing

them into ARNWR, the Service responded in the final rules that they would limit their release of wolves to no more than 12 animals. Further, the Service stated the refuge and adjacent U.S. Air Force lands could eventually sustain a red wolf population of 25 to 35 animals. In 1995, the Service amended its special rule to include additional Federal lands. The Service stated the reintroduction area probably could not support 30 wolves for an extended period of time; however, the addition of Pocosin Lakes National Wildlife Refuge (PLNWR) would add approximately 112,000 acres to the reintroduction area. The Service estimated the additional refuge lands could support 15 to 25 wolves. Thus, based on the 1995 rule, the Service estimated a total carrying capacity of 55 wolves on Federal lands.

The Red Wolf Recovery Plan institutes the clear goal that the nonessential experimental population of red wolves introduced into northeastern North Carolina (NENC) should be managed on "Federal lands." Further, the recovery plan explicitly states the objective that the population be "self-sustaining." The Service's 1986, 1991, and 1995 special rules for the red wolf NEP incorporate this goal and objective.

CONDUCTING THE EXPERIMENT IN NORTH CAROLINA

According to Service records 165 wolves were released into the NENC population between 1986 and 2014, 130 of which came from the SSP captive breeding program, far exceeding the 12 wolves noted in the 1986 final rules. Further, of those releases, 64 occurred on private lands—an action that is not authorized in the Service's rules nor is it congruent with the goal of managing wolves on Federal lands.

In the 29-year period since the reintroduction of red wolves into NENC, active management of habitat for red wolves has been minimal. Consequently, wolves have persisted predominantly on private lands. As evidenced by research, red wolves are more likely to utilize agricultural fields than all other habitat types combined. Early successional fields comprise the second most likely utilized habitat type. Both of these habitat types are primarily found on privately-owned lands within the reintroduction area. This well documented persistence on private land is not in harmony with achieving the explicit goal set forth in the Red Wolf Recovery Plan that the red wolf population in NENC should be managed on "Federal lands."

Because the population of red wolves reintroduced to NENC was determined to be a nonessential experimental population in accordance with Section 10(j) of the ESA, the final special rules included circumstances under which take of the species was authorized. Those take provisions were promulgated in accordance with Section 4(d) of the ESA.

Under the special rules that apply to the NENC NEP red wolf population, the Service stated "programs to purposely reintroduce predators, such as the red wolf, must be accompanied by provisions to protect private property from the presence of such reintroduced animals if the landowner does not want them on his property." Accordingly, those rules incorporate the requirement that the Service remove unwanted wolves from private land upon request of the landowner. The Commission has worked closely with the Service to try to fulfill this requirement; however, most efforts have proven to be ineffective, largely due to the tremendous challenges associated with recapturing animals and the propensity for animals to return to the vicinity of their capture subsequent being released again on Federal lands.

The special rules also allow direct and incidental take of red wolves by landowners under certain circumstances, including incidental take pursuant to lawful harvest of coyotes. Despite those explicit provisions, the Commission was sued in Federal court for adopting state regulations that allowed coyote hunting at night statewide. Ironically, a court ordered injunction provided greater Federal protection to non-native coyotes than to the red wolf. Ultimately, the state entered into a settlement agreement that restored coyote hunting during daylight hours, but maintained a prohibition against hunting coyotes at night within the five-county reintroduction area.

LESSONS LEARNED

The NENC NEP is one of two attempts to reintroduce red wolves in to the wild. The other experiment in Great Smoky Mountains National Park located in the North Carolina-Tennessee mountains failed, in part, due to lack of access to key land areas, including private lands. The Service terminated the experiment in 1998 based on low pup survival and the inability of the wolves to persist on Federal lands.

The NENC experiment and associated regulations were not designed to achieve a recovery scale population. Instead, the experiment provided an opportunity to test goals incorporated into the Red Wolf Recovery Plan. Specifically, the Federal lands

in NENC provided a crucial living laboratory to test if red wolves could achieve wild reproduction, become self-sustaining, and persist on Federal lands.

Perhaps one of the greatest accomplishments of the NENC NEP was to prove that captive red wolves could be introduced into and reproduce in the wild. Prior to the proliferation of coyotes on the landscape, there were some indications that the red wolf may become self-sustaining over time; however, coyote interactions drastically deceased if not eliminated this feasibility.

With the continued expansion of coyote ranges in the continental United States, including eastern North Carolina, the threat of genetic introgression of coyotes into the NENC red wolf population increased throughout the 1990s and the first known hybridization event occurred in 1993. In 1999, similar to the 1970s, the Service declared hybridization with coyotes the greatest threat to red wolf recovery. North Carolina hunting and trapping records provide state-level indices of harvest. In the 10-year period from 2002 to 2012, reported numbers of coyotes trapped statewide increased from 133 to 3458, an increase of 2600 percent. In the five counties comprising the red wolf reintroduction area, reported harvest increased from 0 to 138 coyotes between 2004 and 2012. For the foreseeable future, it appears the hypothesis that red wolves can become self-sustaining, particular within landscapes that include coyotes, has been disproven.

There is an abundance of data that clearly indicates red wolves cannot be managed to stay on Federal lands. Furthermore, significant resources are necessary to attempt to meet such expectations and to date, no management scheme has proven effective to meet the expectations of private landowners. Today, nearly 30 years after the first reintroductions in Dare, there is one known wolf pack occupying Federal lands, despite releases of 58 wolves into Dare County. It is clear that any success future reintroductions must be accompanied by participation and support of private landowners. Realistic expectations, predictability, responsiveness, and accountability are essential to sustaining support.

CURRENT STATUS

On September 12, 2016, the Service announced recommended decisions in response to an ongoing evaluation of the Red Wolf Recovery Program. The Service's decision memo acknowledges growing concerns from private landowners regarding management of the Service's NENC project and the collaborative commitment between the Service and the Commission to develop a canid management strategy. The memo further outlines the actions taken by the Service in the past 3 years to evaluate the program.

The decision memo describes decision options and recommendations for the overall Red Wolf Recovery Program and the NENC NEP. The memo includes important information regarding the current status of the SSP captive breeding population and the NENC NEP. This information from a report released June 10, 2016 by the Red Wolf Population Viability Analysis (PVA) workgroup is the most up-to-date information currently available.

With regard to the NENC NEP, the Service recommends reducing the focus of the NENC NEP to Federal lands within Dare County, removing isolated wolf packs from lands to which the Service lacks access, incorporating those animals into the SSP captive breeding program, and to better manage the remaining animals to the Federal lands in Dare County.

The June 10, 2016 PVA workgroup report indicates that under conditions modeled in the baseline scenario, the SSP captive breeding population has a moderate chance (65.7 percent) of maintaining the genetic diversity for at least 150 years as set forth in the Red Wolf Recovery Plan. Further, under conditions modeled for the NENC NEP in the baseline scenario, the population is projected to crash in as few as 8 years. The PVA workgroup modeled a range of permutations to examine options that would improve chances for success. Of the model simulations, the permutations that reflected an increase to 400 animals in the SSP captive population indicate the best chances for successfully maintaining red wolf genetics as set forth in the red wolf recovery plan. In fact, the scenario under which the SSP captive breeding program capacity is increased to 400 animals and all NENC NEP wolves are brought into program yielded a 91.2 percent chance of maintaining the genetic diversity for at least 150 years as set forth in the Red Wolf Recovery Plan. There were several other model scenarios that yielded a greater than 90 percent chance of success, but each scenario was based on the operational premise that captive breeding success could be increased more than 30 percent from 19 percent to 25 percent.

The Service's decision memorandum states the species is not secured in captivity and the SSP captive breeding population must increase to approximately 400 animals with a minimum of 52 breeding pairs. It further states this is the number

one management priority for the red wolf recovery program and that if the situation is not managed immediately, the entire species would be in peril. It is notable that the fundamental basis of establishing the NENC NEP was the red wolf was secure in captivity.

The Service's recommendation to maintain a small population of intensively managed wild wolves as part of an SSP captive breeding program meta-population is incongruent with this priority. Intensive management required to address the perpetual risks of hybridization with coyotes and to recapture wolves that leave Federal lands will encumber critical financial and human resources that should be used to expand capacity within the SSP captive breeding program. Recall that hybridization with coyotes was the impetus for forced extirpation of red wolves from the wild three decades ago. Further, the recent PVA report indicates the NENC NEP has a 2.38 times higher risk of mortality than the SSP captive population.

The Commission believes there currently exists a clear and present danger of species extinction and the best decision for safeguarding the red wolf is to capture the remaining wolves in the NENC, safely secure them in the SSP captive breeding program, and redirect resources toward increasing the capacity of the SSP facilities.

QUESTIONS SUBMITTED FOR THE RECORD BY SEN. TILLIS TO GORDON MYERS, DIRECTOR, NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

Question 1. How closely do you believe the Fish and Wildlife Service is following its own rules and regulations pertaining to the program?

Answer. The U.S. Fish and Wildlife Service (Service) and the North Carolina Wildlife Resources Commission (Commission) pledged to collaborate on management of canid species throughout the Albermarle Peninsula in November 2013. Although the Service leadership in the Southeast Region Office has demonstrated commitment to following the its own rules pertaining to the program during the past 3 years, it is very clear the Service's own rules pertaining to its nonessential experimental population of red wolves are fundamentally unrealistic. The Red Wolf Recovery Plan institutes the clear goal that the nonessential experimental population of red wolves introduced into northeastern North Carolina should be managed on "Federal lands." Further, the recovery plan explicitly states the objective that the population be "self-sustaining." The Service's 1986, 1991, and 1995 special rules for the red wolf NEP incorporate this goal and objective. Both foundational elements have been undeniably disproven. Instead, red wolves predominantly persist on private lands.

Further, the Service established in their 1986 rules that only 12 wolves would be released from captivity; however, according to Service records 165 wolves were released into the NENC population between 1986 and 2014, 130 of which came from the captive breeding program. Further, of those releases, 64 occurred on private lands—an action that is clearly not authorized in the Service's rules nor is it congruent with the goal of managing wolves on Federal lands.

The following is excerpted from a Wildlife Management Institute (WMI) report from November 2014:

> *"We learned that program authority rested largely with local staff. Decisions made at the local level . . . did not always comply with the rules established for the reintroduction program."*
>
> *"FWS staff reported to WMI that some red wolves were released on private property . . . These actions appear to conflict with the 10(j) Rule that stated red wolves would be released on the Alligator River NWR property."*
>
> *"The 10(j) Rules also stated that, at the request of the landowner, wolves would be captured on private property and returned to the refuge property. WMI found that it was a common practice to inform landowners that wolves would not stay on the refuge and would probably return to private property. Some wolves captured on private property were released on private property rather than returned to the refuge lands. These activities were contradictory to the 10(j) Rules established at the onset of the recovery program. WMI concluded that the authors of the rules were either misinformed about red wolf dispersal behavior or were unconcerned if the rules were violated. Local program staff was asked to comply with rules that were untenable."*

Question 1a. Has the Fish and Wildlife Service made good on the commitments it made to private landowners?

Answer. In my opinion, the Service has not and cannot make good on the commitments it made to the private landowners.

Question 2. Do you consider doubling the wolf population and identifying additional non-experimental population sites as a shutdown of the program?

Answer. Doubling the wolf population and identifying additional locations to establish experimental populations is not in any way a "shutdown of the program."

Question 3. Based on the conclusions made in the Red Wolf report Fish and Wildlife Service released last week, what recommendation would the North Carolina Wildlife Resources Commission have made as to the future of the Red Wolf program?

Answer. Based on information from the program evaluation conducted by WMI and released in November 2014; a recent scientific report regarding red wolf taxonomy released in July 2016; and a red wolf population viability analysis released in June 2016, the Commission recommends several actions for the Red Wolf Recovery Program, including the nonessential experimental population of red wolves located in northeastern North Carolina. Specifically, the Commission recommends the Service contract with an independent scientific organization such as the National Academy of Sciences to conduct a scientific review of the Red Wolf Recovery Program, including evaluation of red wolf taxonomy using whole-genome sequence analysis to determine uniqueness of red wolf ancestry and appropriateness of listing red wolf under the Endangered Species Act. Because the primary and existential threat to red wolf recovery is hybridization with coyotes, we believe the evaluation must also examine efficacy of methods to address the threats of hybridization with coyotes; and consider the extent and duration of conservation reliance needed to achieve recovery goals. Finally, the Commission recommends the Service terminate or suspend the Nonessential Experimental red wolf project in North Carolina and redirect available red wolf recovery resources to address deficiencies of the Red Wolf Species Survival Plan captive breeding program.

Question 4. How well has the Fish and Wildlife Service worked with your Agency when it comes to making decisions regarding the management of the Red Wolf program?

Answer. In the past 3 years, the Service leadership has been very forthright in its communication and collaboration regarding on the ground management of the nonessential experimental population of red wolves; however, it is not very clear if our perspectives related to future red wolf program management have been fully considered.

Mr. GOHMERT. Thank you very much.

Director Moore, you are recognized for 5 minutes.

STATEMENT OF VIRGIL MOORE, DIRECTOR, IDAHO DEPARTMENT OF FISH AND GAME, BOISE, IDAHO

Mr. MOORE. Thank you, Mr. Chairman and members of the committee. I will begin by describing Idaho's wolf management today after 5 years of state authority, post-delisting. It is a success. I will then share with you some insights from this journey to recovery and what it means for state management.

In 2016, Idaho's wolf population continues to far exceed the Federal recovery criteria which were 10 breeding pairs and 100 wolves in Idaho. Our state management plan is 15 pairs and 150 wolves above that Federal standard. As our map shows—and you will see the graphic up here—I have one figure. Each of those circles represents a pack. Idaho's wolf population has more than 100 documented packs—now, remember, our goal was 100 wolves—and nearly 800 wolves in the state of Idaho as a minimum population as of this year.

In May of 2016, as I noted, that was the end of the Federal oversight for the 5-year monitoring period post-delisting in 2011. So, not only do we celebrate the success of recovery, we can celebrate the fact that we have successfully done the 5-year monitoring in both the states of Idaho and Montana.

Idaho's biologist manages sustainable prolific wolf population in ways that address the conflicts with people, pets, livestock, and Idaho's other big game population, including our valuable deer, elk, and moose. We primarily manage wolves through public hunting and trapping, as we do with all game species.

As Director, I also authorize additional control actions to respond to specific attacks on pets and livestock, and in situations where predation takes too big a toll on local elk herds and other big game populations. We have 29 elk zones in the state of Idaho; 9 of them are not achieving management criteria; 7 of those have been measured to be the result of predation.

I would also point out that Idaho's management of elk, deer, and other wildlife gave the introduced wolves the food supply necessary for recovering, demonstrating the gray wolf's ability to reproduce and disperse across our state.

Idaho's wolf population passed that 100 wolf recovery goal in 1998, within 3 years of reintroduction. The Federal Endangered Species Act and Federal wolf introduction into Central Idaho and Yellowstone were designed to achieve that outcome: a robust gray wolf population under state management. But the tortuous path on how we got to this point is certainly not a model, in my view, for species recovery.

In fact, I am deeply disappointed that it took an Act of Congress to reinstate the Fish and Wildlife Service's decision to take wolves in Idaho and Montana off of the Endangered Species List, nearly 10 years after Federal and state agencies agreed, and the scientific community generally recognized, that the population met and later far exceeded Federal recovery criteria. Nonetheless, I am thankful to Congress for doing that.

If species do not come off the endangered species list when science-based recovery criteria are achieved, states and local communities may have no incentive to be active participants. In fact, for species having high potential for human conflict, intensive management, and where costs are especially high, the marathon delisting processes may incentivize states and local communities to sit it out on the sidelines of the recovery process, to actively fight proposals to list species, or to avoid expansion of listed species into unoccupied habitat—all factors affecting us today.

Certain advocacy groups sought to leverage legal road blocks to increase Federal requirements and minimum population size, hunting moratoriums, and other post-delisting management restrictions. This resulted in a lot of problems for the state of Idaho. Lawsuits also hampered our ability to use ESA tools for management.

As our effort to improve this incredibly frustrating situation came to an impasse in late 2010, as a result of all of those legal and other actions, our governor chose to notify the Fish and Wildlife Service that we would no longer be involved in management of wolves in the state of Idaho. Fortunately, Congress intervened to reinstate the Fish and Wildlife Service's final rule to

delist wolves in part of the Northern Rocky Mountains, including Idaho, in 2011.

Under state management since 2011—I am going to run out of time here, so I will thank you for your time and move on.

[The prepared statement of Mr. Moore follows:]

PREPARED STATEMENT OF VIRGIL MOORE, DIRECTOR, STATE OF IDAHO DEPARTMENT OF FISH AND GAME

The Committee invited Idaho to share our state's perspective on Federal management of wolves. Let me begin, however, by describing wolves in Idaho today under state management. In 2016, Idaho's professional wildlife biologists manage a recovered wolf population that is sustainable and prolific, and we do so in way that addresses wolf conflicts with people, pets, livestock, and Idaho's other big game populations, including elk, deer, and moose.

Idaho's wolf population continues to far exceed the recovery levels set by the U.S. Fish and Wildlife Service, which were 10 breeding pairs and 100 wolves in Idaho. As our map shows, Idaho has more than 100 documented wolf packs, distributed across much of our state (see attached map depicting documented and suspected wolf packs at the end of 2015). That means we have more wolf packs than the Federal recovery goal was for individual wolves in our state.

Under state management, we are able to maintain this robust wolf population and reduce conflicts, primarily through public hunting and trapping. Our Agency takes additional control actions to respond to specific attacks on pets and livestock, or situations where predation takes too big of a toll on local elk herds or other big game populations.

In May 2016, Idaho marked the end of Federal oversight of wolf management in Idaho with our successful completion of the 5-year Federal monitoring period that follows delisting. At the end of 2015, about 800 wolves inhabited Idaho, based on intensive annual capture and radio-collaring, trail cameras, harvest reports, and reliable public observations. Similar maps of surrounding states would show a strong core population in Idaho, Montana, and Wyoming, with wolf dispersal and breeding packs well into Oregon and Washington and as far as California.

The Federal Endangered Species Act and Federal wolf introduction into central Idaho and Yellowstone were supposed to achieve this outcome—a robust gray wolf population under state management. The tortuous path to how we ultimately achieved a state-managed, robust wolf population, however, is certainly not a model for species recovery.

In fact, I'm deeply disappointed that we needed an Act of Congress to reinstate a U.S. Fish and Wildlife's decision to take wolves in Idaho and Montana off the endangered species list, nearly 10 years after Federal and state agencies agreed, and the scientific community generally recognized, that the population met, and later far surpassed, Federal recovery criteria.

I say that as someone who has invested over 40 years—my entire professional career—as a trained biologist working for, and now leading, state wildlife management agencies, mostly in Idaho. I am the elected Vice-President of the Association of Fish and Wildlife Agencies, which represents state and territorial fish and wildlife management from across the U.S. states, as well as several Canadian provinces and Mexican states. I'm not representing AFWA today, but in my position with AFWA, I am aware of the choices my counterparts in other states face in how they engage in conservation of ESA-listed species.

If species do not come off the endangered species list when science-based recovery criteria are achieved, states and local communities have no incentive to be active participants in recovery efforts. In fact, for species having a high potential for human conflict or other intensive management, where the costs of meeting Federal monitoring and management requirements are especially high, marathon delisting processes incentivize states and local communities to sit on the sidelines of the recovery process, to actively fight proposals to list species, or to avoid expansion of listed species into unoccupied habitat.

If the Federal ESA delisting process is ultimately an exercise in moving the goalposts such that Federal restrictions never really end and the Federal Government prescribes how states manage populations well above recovery criteria, states and local communities will question why they should invest their time and money in the enterprise. That's simply not a good incentive program for wildlife conservation.

Protracted administrative and legal delisting delays based on procedural technicalities and armchair quarterbacking, rather than legitimate scientific or management concerns, also fuel public resentments toward the species and the ESA.

Now that Idaho has state management of a recovered, robust wolf population in Idaho, we sometimes forget where we were right before congressional intervention in 2011.

Gray wolves were listed under the Endangered Species Act in 1974. In 1987, the U.S. Fish and Wildlife Service developed a Northern Rocky Mountain Wolf Recovery Plan, with recovery goals of 100 wolves and 10 breeding pairs in each of the three states of Idaho, Montana, and Wyoming.

In a controversial action, the Federal Government transplanted a total 66 wolves into Yellowstone and Central Idaho in 1995 and 1996, as a "10j" nonessential experimental population. The Federal Government provided assurances that there would be resources and mechanisms to address predation conflicts with livestock and elk and deer populations. These assurances did not come to fruition; what happened instead was over 10 years of largely unchecked population growth, while Federal restrictions limited our ability to address a corresponding increase in wolf-human conflicts with our agricultural community and with excessive predation impacts on elk herds.

Idaho's management of elk, deer, and other wildlife gave the introduced wolves a good food supply. Demonstrating the gray wolf's ability to reproduce and disperse, Idaho's wolf population had already passed the 100-wolf recovery goal in 1998, within 3 years of introduction. By 2002, the Fish and Wildlife Service recognized that the Northern Rocky Mountain gray wolf population was recovered, and that delisting was appropriate. The Service eventually issued a final rule delisting the population in 2008, but a Federal district court ordered wolves back on the list, citing deficiencies in the Service's reliance on Wyoming's state management plan. The Service delisted the Northern Rocky Mountain wolf population outside of Wyoming in 2009, but the Federal district court ordered wolves put back on the list, again citing procedural deficiencies with the Federal agency delisting, rather than biological ones.

Not only did lawsuits and protracted administrative process thwart the transfer to state management that was supposed to happen upon recovery, they also hampered our ability to use tools like the ESA's 10j rule, which the Federal Government had said states would be able to use to respond to conflicts where predation was taking too big a toll on our elk herds.

Certain advocacy groups sought to leverage legal and administrative roadblocks to increase Federal requirements for minimum population size, hunting moratoriums, and other post delisting management restrictions. Federal funding was insufficient to meet our wolf monitoring and management responsibilities. Advocacy group compensation programs for wolf predation on livestock were short lived and inadequate to cover all losses associated with the growing conflicts. After our efforts to improve this incredibly frustrating situation came to an impasse, in late 2010 Idaho's governor notified the Fish and Wildlife Service that we were ending our state's participation in wolf management until wolves were delisted.

Fortunately, Congress intervened to reinstate the Fish and Wildlife Service final rule to delist wolves in part of the Northern Rocky Mountains, including Idaho, in 2011.

Under state management, we have substantially reduced wolf predation on livestock. In 2010 there were 109 wolf depredation incidents on livestock in Idaho with 75 cattle and 148 sheep confirmed killed. In 2015 there were 55 depredation incidents with 35 cattle and 125 sheep confirmed killed. We have demonstrated that a combination of regulated public wolf hunting and trapping seasons, and agency-directed control to address specific livestock predation situations, have been effective at reducing these conflicts. This is consistent not only with our state wildlife management policy, but also the original commitments of Federal wolf recovery to mitigate financial impact of wolf predation on ranching families.

In contrast, where wolves remain under Federal management and under protection of the ESA in Wyoming, wolf depredations on livestock have continued to increase. In 2010, 26 cattle and 33 sheep were confirmed killed by wolves. That impact has grown to 105 cattle and 103 sheep killed in 2016 through the first week of September.

In closing, I again draw your attention to the map I referred to at the beginning of my statement.

As the map shows, the recovered wolf population under state management is distributed throughout Idaho's forest lands. The Federal recovery criteria was 100 individual wolves in Idaho, we have 100 documented packs, roughly 800 wolves at the end of last year.

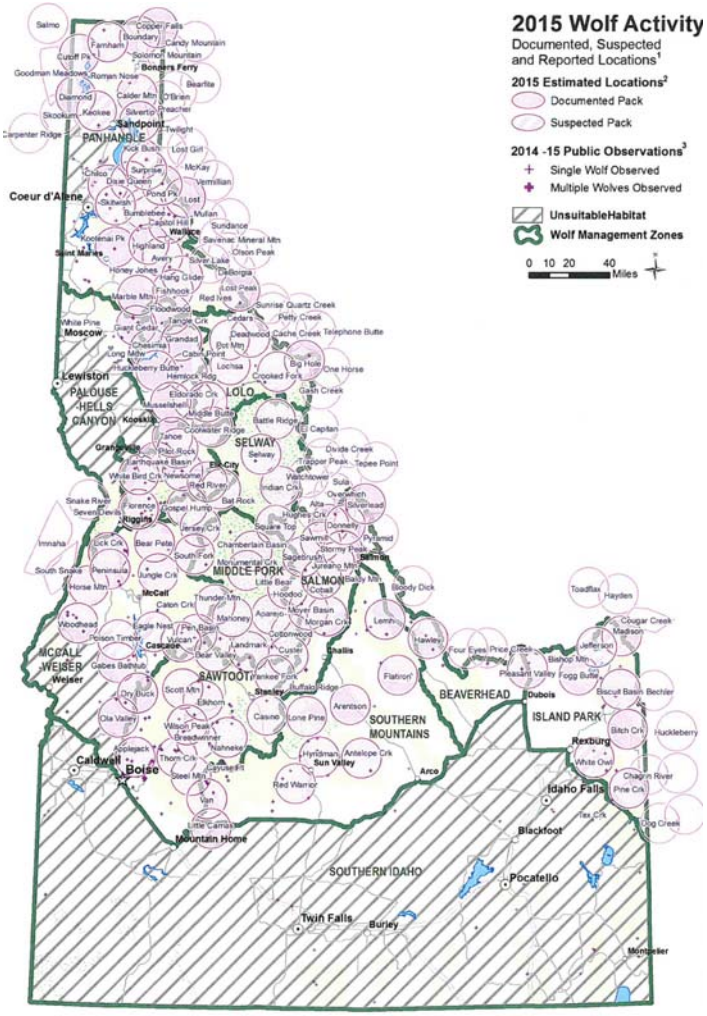
In Idaho, we manage populations of both predator and prey species so they are sustainable, and so they do not need Federal protection. In Idaho, public hunting is important to our culture and our management. We sustainably manage elk, mule

and white-tailed deer, moose, wolves, mountain lions, black bears, a variety of game birds, and many other species of fish and wildlife.

Our Nation has long recognized that managing wildlife and conflicts between wildlife and people, as well as reconciling different public values about wildlife, is the traditional province of state police powers. Federal management of migratory birds, endangered species, and Federal enclaves such as Yellowstone National Park, serve as the exceptions and not the rule.

It should not take an Act of Congress to return a species to state management once it is clearly no longer threatened or endangered. And if states and local communities know it *is* going to take an Act of Congress to return management decisions to them despite their investing a lot of energy and financial resources on a single species, most sensible people with lots of priorities to choose from are going to choose elsewhere. Wolf management in Idaho should be an ESA success story, but what it took to get to this point is also a cautionary tale for those of us who care deeply about wildlife conservation.

ATTACHMENT



QUESTIONS SUBMITTED FOR THE RECORD BY REP. NEWHOUSE TO VIRGIL MOORE, DIRECTOR, IDAHO DEPARTMENT OF FISH AND GAME

Question 1. Can you discuss the ways wolf management in Idaho has improved under state-level management? What are the major changes and benefits you have seen compared with Federal management of gray wolves in Idaho?

Answer. Under state management, wolf predation incidents on livestock and domestic animals have declined. With state management of wolves, we have made improvement in some backcountry elk herds for which wolf and other predation has been a major factor in herd decline. Although less quantifiable, the ability to manage the wolf population through licensed, regulated hunting and trapping has generally improved attitudes toward wolves in communities within and near where wolves occur. It has likewise been important for the state to be able to take agency action as appropriate to address wolf predation on livestock and domestic animals or predation on elk and other ungulates, both in terms of predation management and public attitudes. Under state management, Idaho's wolf population has remained robust and well above Federal recovery criteria.

Question 2. In your testimony you state that the failure to delist species that are no longer endangered or threatened removes the incentive for states and local communities to be active participants in recovery efforts. This has been a source of frustration for me due to the partial-listing in Washington State and the ongoing conflicts between wolves and livestock. I have been a staunch proponent of delisting the gray wolf and returning management to the individual states, which I believe are better prepared to manage the species. Through your experiences in Idaho, what advice would you give to communities in Washington that want to see a Federal delisting and return to state-level management? Additionally, what do you view as the biggest impediments to a Federal delisting actually occurring?

Answer. I would defer to Washington to evaluate what solutions may work best for that state's unique circumstances. In Idaho, the biggest impediments to Federal delisting were lawsuits and protracted administrative processes, despite the wolf population being well above recovery standards soon after wolf introduction into central Idaho and Yellowstone in the mid-1990s. In Idaho's experience, some advocacy groups and legal organizations continue to pursue procedural litigation, administrative appeals, and political pressure to obtain or prolong listed status for species despite broad scientific support for delisting or non-listing. Their incentives for doing so appear to outweigh any disincentives. My prepared statement described the negative consequences of delisting paralysis.

We found it valuable to make our case for delisting efforts in multiple forums. In addition to pursing and supporting the U.S. Fish and Wildlife Service's rulemaking for delisting, and defending those efforts in court, we also coordinated with our congressional delegation, state and local elected officials, the Western Governors Association, the Western Association of Fish and Wildlife Agencies and its national counterpart, and wildlife professional associations such as the Wildlife Society. We also found it important to provide scientific and professional wildlife manager perspectives to respond to misinformation spread by some advocacy groups. One example of a response is available at: https://idfg.idaho.gov/press/op-ed-idahos-wildlife-professionals-advocacy-groups-stop-crying-wolf.

Question 3. You discussed how wolf populations in Idaho have remained robust under state management, while also allowing for a reduction in conflicts between wolves and livestock populations. You also detail the exhaustive, marathon-like process Idaho had to go through to delist and return the wolf to state management. As I'm sure you're well-aware, Washington is currently confronting many of the same issues and problems that you have discussed today. In your opinion, will Washington be able to adequately address wolf predation while it remains federally listed under ESA? What steps could Washington take to improve this process absent a Federal delisting?

Answer. Wolves in western Washington are federally listed as endangered. Endangered status significantly restricts management options to address wolf predation, and the U.S. Fish and Wildlife Service is the lead agency, not the state. Take of endangered species requires USFWS authorization, and the Endangered Species Act broadly defines "take."

Wolves in northern Idaho were previously listed as endangered, and wolves introduced into central Idaho and Yellowstone were listed under a "10j" designation as a nonessential, experimental population. Federal 10j regulations were supposed to allow more flexibility for management, including the ability to respond to excessive predation on ungulate populations. However, that promised flexibility did not

materialize to protect elk and other ungulate populations, again due to litigation and protracted administrative processes. So I would expect USFWS to offer little management flexibility as the lead agency for wolves listed as endangered.

Mr. GOHMERT. OK, thank you very much.

Dr. Vucetich, you are recognized for 5 minutes.

STATEMENT OF JOHN VUCETICH, ASSOCIATE PROFESSOR, SCHOOL OF FOREST RESOURCES AND ENVIRONMENTAL SCIENCE, MICHIGAN TECHNOLOGICAL UNIVERSITY, HOUGHTON, MICHIGAN

Dr. VUCETICH. Thank you, Mr. Chairman and the committee, for allowing me the opportunity to testify today. I think with a hearing, or a discussion, about wolves, it is appropriate to have some kind of broad context about where it is that we have been with respect to wolf management and how far it is that we have come.

Wolves once inhabited most of the Lower 48. After more than a century of persecution by humans, their darkest hour led wolves to be just a few hundred living in the most remote portions of the state of Minnesota. Then, beginning in approximately the 1970s, and for the next four decades, we, the American people, made tremendous strides and advances in wolf conservation. Today, there are about 5,500 wolves living in the Lower 48. This represents about 15 percent of the former range over which wolves once lived.

While we have made great progress, at the very same time there is still much work to do. I also think that continuing the work that needs to be done may indeed require some course correction in some of the directions that we have been going.

Wolves are a complicated and diverse issue. There are wolves in, of course, the Northern Rockies and the Western Great Lakes. There are red wolves and there are Mexican wolves. In all of these cases, there are some issues that are very important. But distinct to those populations—for example, for red wolves—issues about hybridization are a great concern. In the Western Great Lakes, there are concerns about the application of distinct population segment policy.

While there are these distinct differences among the geographic regions where we conserve wolves, there are also some common themes; and the common themes, of course, are familiar to everyone in the room, I think. They include conflicts with livestock, and they include conflicts with interest related to deer and elk hunting. They include perceived risks pertaining to human safety, and there are also some legal and policy issues. Those four items, while they are challenging, are also very, very manageable issues. And, not only are they manageable issues, humans are quite positive in their attitude about wolves, positive enough to allow us to overcome these challenges.

But I think it is also fair to ask, if there are these challenges, why would we even bother trying to meet them? It is a hard thing to do. What is the interest? I think the interest is that the health of many of our Nation's ecosystems depends greatly on the presence of healthy, functioning wolf populations.

Just as important, when Americans talk about wolves, we are not talking just about the four-legged creature. We are, at the very same time, talking about a symbol. We are talking about something that represents our understanding of how it is that we relate with nature on the whole. That is an unfortunate burden for wolves to have to bear. But, nevertheless, it is how we approach wolves. And what this means is that we have to get it right. If we don't get it right with wolves, we will be not getting it right with our relationship with nature on the whole.

As a result, our treatment of wolves, and our treatment of the people who are impacted by wolves, is going to be a bellwether for how it is that we treat other natural resources in the United States, and it will be a bellwether for how it is that we treat other species under the Endangered Species Act. So, these are the two reasons that it is so important to get it very right.

I think it is also important to appreciate that the American people are very supportive of this. They have the endurance for it, they have the energy for it. What we need most, I think, is better leadership, better leadership both from Congress, from the Fish and Wildlife Service, from state governments, and from NGOs to live up to the expectations that the American people have for how it is that we manage wolves.

Thank you very much for the opportunity to share.

[The prepared statement of Dr. Vucetich follows:]

PREPARED STATEMENT OF JOHN A. VUCETICH, PH.D., SCHOOL OF FOREST RESOURCES AND ENVIRONMENTAL SCIENCE, MICHIGAN TECHNOLOGICAL UNIVERSITY

I am a professor in the School of Forest Resources and Environmental Science, Michigan Technological University. I have held a faculty position with Michigan Technological University since 1996. My scholarly expertise is population biology, most frequently examining wolves and their prey. I am also a scholar for certain topics pertaining to the human dimensions of conservation. I have authored or co-authored more than 80 peer-reviewed articles over the past two decades related to these and other subject areas, and have given more than 50 invited talks in the past 12 years.

I have been studying wolves for about 25 years. My predation ecology research includes but is not limited to how predator populations affect their prey and how prey affect predators. The majority of my wolf-related scholarship has been in Isle Royale National Park, located in Michigan and surrounded by Lake Superior. I have been working on the Isle Royale wolf-moose project since the early 1990s, and have been leading the project since 2001. It is also the longest running wolf study in the world and the longest study of any predator-prey system in the world.

OVERVIEW

Prior to persecution by humans, wolves inhabited most of the coterminous United States. By the 1960s, after more than a century of persecution, wolves in their darkest hour were reduced to perhaps a few hundred, living only in the remote northern reaches of Minnesota. Over the past four decades, however, we have made incredible progress toward the recovery of wolves. Today, approximately 5,500 wolves inhabit about 15 percent of their historic range within the coterminous United States. That effortful progress is one of the success stories in American conservation. At the very same time, the job is not done. Important work remains. Moreover, if we are to be successful, then some adjustment to our present course is required.

Essential background for many concerns about wolf conservation is conveyed through the series of annotated maps that are included as Supplementary Material #1 appended to the end of this testimony. The maps pertain to gray wolves (*Canis lupus*), including a subspecies known as the Mexican wolf (*Canis lupus baileyi*). Red wolves are not treated in that series of maps, but are addressed in a separate section of this testimony.

The conservation and recovery of wolves entails a broad and disparate range of topics. In this testimony, I will highlight several of these topics.

The essential issues surrounding wolves—livestock losses, interests pertaining to deer and elk hunting, perceived threat to human safety, and legal/political issues—these issues are all quite manageable.

The health of many of our Nation's ecosystems depends on the presence of healthy, functioning wolf populations (see Supplementary Material #2 for a pictorial summary). Wolves are also important for a second reason. That is, wolves are important for what they represent. When we Americans talk about wolves we are speaking simultaneously about *both* the four-legged creature *and* a creature that represents our understanding for how we ought to relate to nature. If the bald eagle is sacred as a symbol of our national spirit, then wolves are sacred as a symbol of our relationship with nature on the whole.

Consequently, our relationship with wolves is a bellwether for our relationship with nature and the Nation's natural resources. For similar reasons, our treatment of wolves through the U.S. Endangered Species Act, 1973 (ESA) is also a bellwether for how we will treat the ESA in general and for the hundreds of species whose well-being depends on ESA protection.

For those two reasons, we must get it right by discovering a healthy relationship with wolves. We will be defined, in part, by the kind of relationship we forge with wolves *and* the fair treatment of our fellow citizens who are impacted by wolves in a genuinely negative manner. Those relationships, whatever they may be, will say much about the kind of people that we are.

Opportunities to work through some important challenges of conservation are impaired if and when Congress intervenes by making decisions about individual species in the context of the ESA. Such intervention can seem like an expedited solution, but its larger effect is to inhibit progress on the broader issues. Congress, the Fish and Wildlife Service, state wildlife agencies, and NGOs can all do better to provide stronger leadership on these issues. The American people are supportive of this work and we are more than able to handle this work.

WESTERN GREAT LAKES WOLVES

The Fish and Wildlife Service delisted gray wolves in the Western Great Lakes in December 2011. The decision was challenged in Federal court. In December 2014, the court rejected the Fish and Wildlife Service's delisting decision and ordered the Fish and Wildlife Service to restore ESA protections for gray wolves in the Western Great Lakes. An important basis for the court's decision was that a DPS cannot be designated for the purpose of delisting. Details of the court's opinion in this case and other related cases indicate that the root concern is considerably broader.

The broader pattern of court decisions indicate that the ESA requires a species to be well-distributed throughout its historic range. That view is also well supported by conservation scholarship (e.g., Vucetich et al. 2006, Tadano 2007, Enzler & Bruskotter 2009, Geenwald 2009, Kamel 2010, Carroll et al. 2010, and Bruskotter et al. 2014, and references therein). On those grounds, Western Great Lakes wolves should not be delisted.

Failure to understand the legal definition of 'endangered species' also lies at the heart of concerns for the management and delisting of gray wolves in the Northern Rocky Mountain DPS.

Addressing these concerns would require the FWS to:

1. Develop policy on "significant portion of range" that is consistent with the ESA. I believe the courts will eventually decide that the current Fish and Wildlife Service policy on this topic is inconsistent with the ESA. ("Significant portion of its range" is a key phrase in the legal definition of endangered species.)
2. Develop a robust national plan for wolf conservation and recovery.

RED WOLVES

Background

There are important scientific uncertainties about the taxonomic status of red wolves. Nevertheless, there is widespread agreement among experts that the red wolf is a listable entity under the ESA under any plausible scenario describing its evolutionary history (see, e.g., USFWS 2016). Consequently, a recovery program is required by law.

The Fish and Wildlife Service had been managing red wolves through an "adaptive management" program that appears to have been effective in maintaining and growing the red wolf population. This adaptive management program included, among other strategies, sterilizing coyotes in order to reduce hybridization between wild red wolves and coyotes. Such hybridization adversely impacts the genetic

constitution of the red wolf population and negatively impacts the ability of the red wolf population to grow and expand.

The red wolf population has declined from more than 100 wolves to 45 to 60 wolves in 2 years' time. The population is in extreme danger of extinction.

Recently, the Fish and Wildlife Service ended its adaptive management program and reintroductions of red wolves on the landscape, while allowing landowners to request the removal of wolves by lethal and nonlethal means. Those circumstances will exacerbate an already dire situation.

Concerns about the removal of wolves from private land need to be resolved because it is not possible to have a recovered red wolf population without red wolves living on private lands.

Even though this red wolf population is designated as nonessential experimental, its loss would be a grave setback to red wolf recovery.

Red wolves are adversely affected by poaching. Anti-poaching laws exist but are not enforced. Anti-poaching laws are not enforced through an informal policy known as the McKittrick policy. Under the McKittrick policy, prosecutors do not pursue cases of red wolf poaching if the defendant claims the killed animal was a coyote. Some additional background is provided in Cart (2013). The policy lends tacit support for poaching red wolves and is antithetical to red wolf recovery. In no other part of our American hunting heritage is mistaken identity a defense for poaching. The McKittrick policy should be discontinued.

Recovery Goals

An explicit goal of the Fish and Wildlife Service's Red Wolf Recovery Plan is to grow the wild population of red wolves to 220 individuals. With the population recently having declined significantly from approximately 100 animals to perhaps less than 50, management clearly is not moving toward, and may even be undermining, that established goal.

Recent actions of the Fish and Wildlife Service are not moving toward that goal. These recent actions are more consistent with abandoning the conservation and recovery of the red wolf than with its advancement.

In addition, these recovery goals were set 30 years ago and do not reflect the best available science about the size of a recovered population. Any formal scientific review of the recovery plan would undoubtedly recommend increasing the number of red wolves needed in the wild to qualify as recovered under the ESA. Until the recovery plan and the targets are updated, however, the Fish and Wildlife Service should work toward its established recovery goals.

Last week the FWS announced significant adjustments in its approach to managing the red wolf recovery program. The announcement is explained in a memorandum (12 Sept 2016) to the Regional Director (of the FWS's Southeastern Region) from the Assistant Regional Director (USFWS 2016). The changes include a significant shift of effort away from the experimental population. The underlying rationale for the adjustment is "maximizing efficient use of Services resources." In scholarly parlance, the rationale is "conservation triage."

The concern is that conservation triage, when conducted according to the principles of best-available science, require a formal, explicit, and appropriately quantified analysis of the cost and benefits of various allocations of resources (e.g., Botrill et al. 2008, McDonald-Madden et al. 2008). To my knowledge, no such analysis has been shared with the public.

General concerns about the FWS's treatment of conservation triage were aptly summarized by Evans *et al.* (2016). They wrote that the Fish and Wildlife Service (FWS) has

> *a prioritization system for analyzing trade-offs . . . [that] includes 36 ranked categories grouped according to 4 factors: degree of threat, potential for recovery, taxonomic uniqueness, and conflict with human activities . . . However, it is well established that FWS does not frequently use its system. Instead, FWS's allocations are more often driven by political and social factors* [emphasis added], *including congressional representation, the number of employees in field offices, staff workload, and opportunities to form partnerships and secure matching funds. In addition, different regions and field offices often use different allocation formulas.*

> *Without following a uniform and explicit system for prioritizing recovery actions, FWS cannot efficiently allocate its funding to meet recovery needs. That is partly why most recovery funding has benefited only a small fraction of listed species. Moreover, FWS cannot clearly articulate to Congress and other stakeholders what recovery actions it will implement with available funding and what additional achievements are possible with more funding. As a result, the agency is poorly positioned to request additional funding.*

The authorship of Evans et al. (2016) included 18 scholars, including federally-employed scientists that collectively represent considerable ESA expertise.

I am also concerned that the memorandum associated with announcement (i.e., USFWS 2016) seems to arrive at its conclusion, in part, through a misunderstanding or misrepresentation of some of the science that is cited (and should have been cited) in the memo, especially Gese et al. (2015), Murray et al. (2014), and Bohling et al. (2016; *Evolutionary Applications*).

Because last week's announcement was (i) preceded by FWS actions that represent a significant shift in effort away from the experimental population and (ii) not accompanied by a formal and appropriately quantified analysis of the costs and benefits associated with various allocations of resources—for those two reasons, there is a concern that the announcement is an *ad hoc* explanation for the shift in focus and that the appropriateness of the announced shift was prejudged.

MEXICAN WOLVES

Mexican wolf recovery has faced a variety of challenges. I believe the three most important concerns at present are:

The FWS has failed to fulfill its statutory obligation to develop a scientifically defensible recovery plan. In response to a legal challenge to FWS's failure to complete a recovery plan, the FWS committed in a settlement agreement to complete a recovery plan by November 30, 2017. More precisely, the Fish and Wildlife Service has been actively attempting to develop a science-based recovery plan for the past 15 years. On two occasions in the past 15 years, the Fish and Wildlife Service suspended the activities of the Mexican wolf recovery team just as the team was on the cusp of presenting its findings. The FWS is now working through a third effort. No stakeholder group thinks it is desirable for the recovery planning process to have taken so long. The delays have resulted in stakeholder mistrust and created opportunities to interfere with the scientific process, both of which ultimately impair Mexican wolf recovery. The delay in producing a recovery plan is clearly a problem in its own right, but it is also symptomatic of a deeper, chronic problem.

The second challenge pertains to the reliable identification of best-available science as it pertains to the ESA. The challenge is illuminated, in part, by recent sociological research pertaining to grizzly bear recovery. The scholarship indicates that the problem is identifying best available science. Recent work shows that scientists "working for state or Federal wildlife agencies were 2–3 times more likely to recommend delisting grizzlies than those employed by academic institutions" (Bruskotter et al. 2016). That paper goes on to say that these recommendations:

> *were influenced not so much by an expert's knowledge or assessment of risk but more so by their social environment; in particular, the peers with whom an expert regularly interacts and respects . . . our concern is that supposed scientific judgments may well be heavily influenced by socially segregated groups and their associated beliefs.*
>
> *Of course, it is not inherently problematic that an expert's judgment is affected, in part, by how he or she expects respected peers would judge a given circumstance. Nor is it necessarily problematic that judgments about conservation routinely depend on factors beyond science, like one's values and emotions. Indeed, the dichotomy between facts and values may well be a false dichotomy, as argued by the great American philosopher Hillary Putnam . . .*
>
> *What's concerning here is that, as opposed to academic scientists who are somewhat shielded from politics by tenure, scientists in state and Federal agencies can face strong, top-down pressure to reach a particular decision.*

A full discussion of how to reliably identify the best-available science is beyond the scope of this written testimony. The relevance of this concern to Mexican wolf recovery planning is explained below.

Recent deliberations in the development of a recovery plan may be of concern. In particular, state governments have been advancing the notion that recovery actions should be focused in Mexico. Other scientists on the recovery team believe that

while Mexico is an important partner in wolf restoration, prudent recovery planning should remain focused on efforts in the United States. **The concern is that the political expediency may end up being mistaken for a genuine spirit of state-Federal collaboration** and the Fish and Wildlife Service will focus recovery efforts in Mexico when doing so is otherwise not justified. Details of this concern appear below.

Focusing recovery efforts for *Canis lupus baileyi* in Mexico is unlikely to be successful because the lands in Mexico where recovery efforts might be focused are dominated by private land, higher densities of livestock, and the abundance of wild prey is not reliably known. Because the Fish and Wildlife Service wouldn't focus wolf recovery efforts on such lands if they existed in the United States, the Service should not find it wise to do so in Mexico.

By contrast, recovery efforts would be successful if they focused on selected regions in Arizona, New Mexico, southern Colorado and possibly southern Utah. Details for this claim are presented in draft documents prepared about 2 years ago by the scientific sub-team of the Mexican wolf recovery team.

Mexico is a valuable partner in efforts to restore Mexican wolves. However, the largest share of the task in recovering Mexican wolves will almost certainly fall within the borders of the United States.

Two concerns that are sometimes expressed about efforts to recover *C. lupus baileyi* in the United States are:

1. The historic range of *C. lupus baileyi* did not extend as far north as northern Arizona and northern New Mexico, and
2. *C. lupus baileyi* is physically smaller than other subspecies of gray wolf; as such they are not well adapted to survive on elk. Rather they are better suited to surviving on smaller prey like deer and javelina.

The concerns are addressed by noting:

1. The best-available science indicates that the historical distribution of gray wolf subspecies involved wide zones of overlap such that the traditional notion of historical range, with sharp boundaries, does not apply well.
2. *C. lupus baileyi* living for many years on the Blue Range (in Arizona and New Mexico) demonstrate that they are more than capable of surviving very well on elk.

NORTHERN ROCKY MOUNTAIN WOLVES

Many of the issues surrounding recovery and management of wolves in the Northern Rocky Mountain DPS are identified and discussed in other sections of this testimony.

In 2011, wolves in Montana and Idaho were delisted by an Act of Congress, i.e., a congressional rider to the "Department of Defense and Full-Year Continuing Appropriations Act." That action compromised important opportunities for critical concerns and challenges to be worked out and addressed by key stakeholders (e.g., the Fish and Wildlife Service, state governments, NGOs, etc). Congressional delisting did not ameliorate those concerns and challenges.

HUMAN ATTITUDES PERTAINING TO WOLVES

Attitudes pertaining to wolves are important for at least two reasons:

1. *If* attitudes of Americans were, on the whole, negative; *then* the values and expressed values of Americans may be at odds with the ESA's mandate to conserve and recover wolves.
2. *If* attitudes of Americans are, on the whole, supportive of wolf recovery; *then* negative attitudes by smaller segments of American society represent an important concern deserving attention.

Americans' attitudes toward large carnivores, including wolves, are largely positive. Those attitudes have also become increasingly positive over the past four decades (George et al. 2016; See also Supplementary Material #3). And, only 10 percent of Americans have significantly negative attitudes about wolves (George et al. 2016; See also Supplementary Material #3).

What accounts for the false impression of low tolerance for wolves?

> Some sociological studies suggest that attitudes toward wolves have become more negative over time; these studies tend to focus on hunters and rural residents living within wolves' range (e.g. Treves et al. 2013, Ericsson & Heberlein

2003). While it is important to address these attitudes (see below), they are not representative of the interests of most Americans.

Other research indicates that biased media coverage gives the impression of low and deteriorating tolerance for wolves. For example, Houston et al. (2010) examined North American news coverage about wolves over a 10-year time period (1999–2008). Of the 6,000 stories they analyzed, 72 percent of the news media represented negative attitudes about wolves. They also found that these negative expressions had increased significantly over time. The concern is that media coverage does not accurately represent Americans' attitudes (see George et al. 2016).

In 2003 the Utah Division of Wildlife Resources hosted a series of scoping meetings concerning wolf management. About 80 percent of the 900 people who attended those meeting identified 'do not allow wolves in Utah' as a management priority. At the same time (i.e., in 2003), a systematic study of attitudes toward wolves found that 74 percent of Utahans exhibited positive attitudes toward wolves.

This case illustrates that state agencies can get the false impression of low support for wolves on the basis of their contact with the public. The concern is that agencies' contact with the public is not always representative of the public's attitude on the whole, or even of those who care about wildlife conservation issues. This circumstance is regrettable, but understandable, given that scoping meetings, for example, are often attended disproportionately by stakeholders who are especially upset about an issue. This case and these circumstances are detailed in Bruskotter et al. (2007).

Psychological research indicates that intolerance for wolves (and other large carnivores) may originate from negative emotional reactions toward these species (Slagle et al. 2012) that are at gross odds with scientific knowledge about these species (Johannson et al. 2012). Other sociological research makes the case that negative attitudes about wolves are associated, less so with the negative impact of wolves, and more so with "deep-rooted social identity" (Naughton-Treves et al. 2003; see also Heberlein 2012).

While it is important to ameliorate the adverse impacts of wolves for those few individuals who are actually impacted, doing so is not likely to cause those individuals to have more positive attitudes, as was demonstrated by Naughton-Treves et al. (2003).

Existing data indicate that public support for the ESA is widespread and strong. A sociological study concludes that most Americans (84 percent) are supportive of the ESA (Czech & Krausman 1997). That study also indicated that 49 percent of respondents believed that ESA should be strengthened. And, only 16 percent believed it should be revoked or weakened.

Recent polling data give the same positive impression. One poll, conducted in 2015, indicates that approximately 80 to 90 percent of Americans are supportive of the ESA (Harris Interactive 2011). Another poll, conducted in 2011, indicates that support for the ESA transcends political ideology. That is, support for the ESA by self-identified liberals, moderates, and conservatives is 96 percent, 94 percent, and 82 percent, respectively (Tulchin Research 2015).

Conclusion

The values and willpower of the American people, on the whole, support the ESA and wolf conservation. We are also a sufficiently resourceful and generous people to fairly redress the concerns and negative attitudes held by a small segment of Americans.

WOLF HUNTING

Wolf hunting in several states is intensive enough to raise the following concerns:

1. The Findings section of the ESA (Sec 2.(a)(3)) indicates that species are valuable to the Nation and its people, in part, for their "ecological" value. The primary ecological value of wolves is largely associated with their influence on deer and elk populations, including preventing deer and elk from becoming overabundant. The ecological value of wolves is impaired if they are hunted too intensively. There is considerable evidence that deer and elk are overabundant in numerous places where wolves are intensively harvested or where wolves once lived but no longer live (e.g., McShea et al. 1997, Bradford and Todd 2008; Dickson 2015). Overabundant deer and elk are detrimental to human safety, agriculture, and forestry.

2. An important prospect for wolves achieving recovery is through dispersal and range expansion from areas where wolf populations are already established. The concern is that range expansion is, at least, significantly curtailed by intensive hunting of wolves.
3. Intensive hunting of wolves will likely impair the adequate genetic connectedness of subpopulations in the Northern Rocky Mountain gray wolf population. The importance of adequate genetic connectedness is memorialized through recovery criteria. (This concern is not ameliorated by the feasibility of human-assisted dispersal. For details, see the FWS's scientific peer-review of Wyoming's state management plan conducted in December 2011.)

Four important motivations for wolf hunting:

1. Hatred of wolves is an important motivation to hunt wolves. In the past, hatred has motivated programs designed to eliminate certain populations of wildlife. But, never before in the history of America's hunting heritage has hatred been an acceptable or ethical basis for hunting.
2. Wolf hunting is motivated, in part, by state game and fish agencies' interest to satisfy elk and deer hunters. This motivation may be sensible when all of the following conditions hold: (i) wolves cause elk and deer abundance to decline; (ii) wolf hunting (as implemented) results in a significant increase in elk or deer abundance without impairing the health and functioning of the wolf population; (iii) increased elk or deer abundance will translate to hunters' satisfaction with their hunting experience; and (iv) interests to increase ungulate abundance outweigh interest to decrease ungulate abundance. In many cases, it is far from reasonably certain that all of these conditions hold.
3. Some argue that wolf hunting is important for building tolerance for wolves. However, sociological evidence suggests that tolerance is not built by legal killing of wolves (e.g., Treves et al. 2013, Browne-Nunez et al. 2015, Hogberg et al. 2015).
4. Wolf hunting is also, in some cases and at least to some extent, a kind of trophy hunt.

Concerns raised by the above-mentioned motivations:

Our treatment of wolf hunting is importantly connected to hunting in general. American participation in hunting has been declining for several decades. The demographic forces behind that decline are expected to continue into the foreseeable future. Those trends are of great concern to state wildlife agencies, and they are searching for ways to reverse those trends.

While participation in hunting is low and declining, support for hunting by non-hunters is high. However, that support depends on the reason that is offered for why hunting takes place. For example, 85 percent of Americans support hunting when motivated by the acquisition of meat. But only about 26 percent of Americans support hunting motivated by the acquisition of a trophy. For details, see Duda and Jones (2008).

Because motivation for hunting affects support for hunting by non-hunters and because the motivations for wolf hunting are weak, wolf hunting is liable to harm the honor of America's hunting tradition. We should not be surprised to see that wolf hunting works against interests to promote hunting in a society with waning participation in hunting.

I believe that Congress, the Fish and Wildlife Service, and state wildlife agencies could be effective agents for better promoting our American hunting heritage.

LIVESTOCK, LETHAL CONTROL AND CONFLICT AVOIDANCE

According to a 2011 USDA report on cattle death loss, wolf depredation represents less than half of 1 percent of all losses (USDA 2011). For context, about half of all losses are health-related (e.g., digestive problems, respiratory problems, metabolic problems). Losses due to dogs are almost three times as common as wolf-related losses. Losses due to poisoning and theft are six times as common as wolf-related losses. These statistics are similar within each of the states inhabited by wolves, i.e., Michigan, Minnesota, Wisconsin, Montana, Idaho, Wyoming, Washington, Arizona and New Mexico. Wolves are not a threat to the livestock industry.

In certain instances, wolves compete with the interests of *individual livestock owners*. Those instances are important. The American people share a burden to assist in these instances. To this end, the states, the Fish and Wildlife Service, the Department of Agriculture and non-profit organizations all have programs to assist ranchers financially or with tools and management techniques to reduce conflicts

with wolves. Several varieties of these programs exist, focusing variously on: compensation for livestock losses; cost-share and technical assistance for the use of nonlethal tools that reduce conflict; and incentive payments such as payment for presence. Where there is a need to improve these programs, they should be so improved.

Lethal and Non-Lethal Control

Scientific evidence indicates that lethal control may be less effective than is commonly supposed (reviewed in Treves et al. 2016).

Lethal control is also a source of public controversy, as it is shunned by some stakeholders. A critical component of meeting the challenges represented by lethal control (both the establishment of lethal control policy and the aftermath that can follow some instances of lethal control) is a robust multi-stakeholder committee, such as the Wolf Advisory Group in the state of Washington. The establishment and maintenance of such bodies is effortful, but also very important.

Non-lethal methods are often effective for preventing depredation and avoid conflict before considering lethal control. There is a suite of nonlethal methods and strategies that have been effectively used in the Northern Rockies and the Southwest to do just this. These include: nonlethal predator deterrents such as livestock guarding dogs, fencing and fladry; increasing human presence on the landscape through range riders; use of scare tactics and alarms; best management practices for livestock and land such as changing grazing strategies and removing carcasses.

Those tools have been used effectively, for example, in a community-based project in the Wood River Valley of Idaho—an area with between 10,000 to 22,000 sheep grazing per year. During the first 7 years of the project (which began in 2007) fewer than five sheep were killed per year.

HUMAN SAFETY

Except in the very rarest of circumstances, wolves are not a threat to human safety. Incidents of wolves harming people are incredibly rare. Wolves generally avoid people and in almost all cases people have nothing to fear from wolves in the wild.

In the 21st century, only two known deaths have been attributed to wild wolves in all of North America. There have been no deaths from wolves in the conterminous United States. Far more Americans are killed by bees or dogs than by wolves. Far more Americans are killed in deer-car collisions. Our overall response to any threat to human safety should be, in part, commensurate with the risk of that threat.

On the extraordinarily rare occasions when a wolf has appeared to be even potentially problematic, the appropriate agency (state or Federal) has moved swiftly to address any possible threat. For example, in May 2015, the Mexican Wolf Interagency Field Team lethally removed a wolf that was exhibiting unusual activity near residents and populations in Catron County, New Mexico.

The false impression that wolves are a threat to human safety is fostered by the interaction between (i) a public that is easily and overly impressed by certain kinds of fear and (ii) those who fabricate or exaggerate the threat that wolves represent. The seriousness of these exaggerations is illustrated with two examples from Michigan:

—A state Senator conveyed a "horrifying and fictional" account of wolves threatening humans. That account was included in a 2011 resolution urging the U.S. Congress to remove ESA protections for gray wolves in Michigan. Later the Senator conceded that the account was not true. See Oosting (2013) for details.

—Adam Bump, an official from the Michigan Department of Natural Resources, "misspoke" when he was interviewed by Michigan Radio (a National Public Radio affiliate) in May 2013. Bump apparently said to the interviewer: "You have wolves showing up in backyards, wolves showing up on porches, wolves staring at people through their sliding glass door while they're pounding on it exhibiting no fear." Later, Bump conceded that this did not happen. See Barnes (2013) for details.

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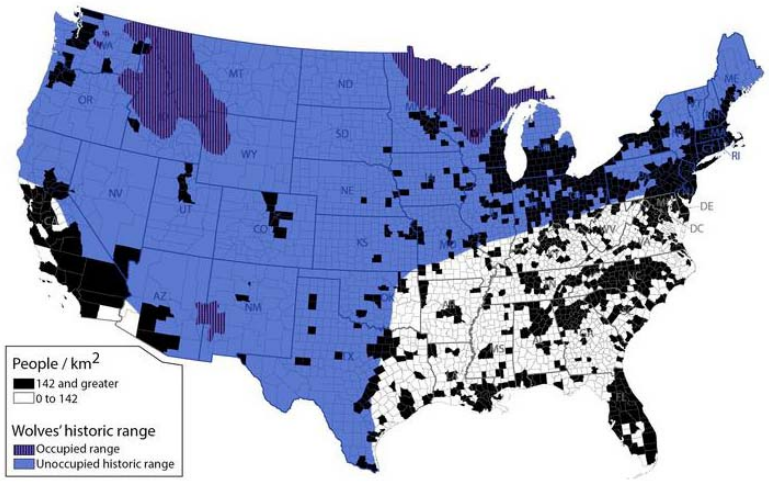
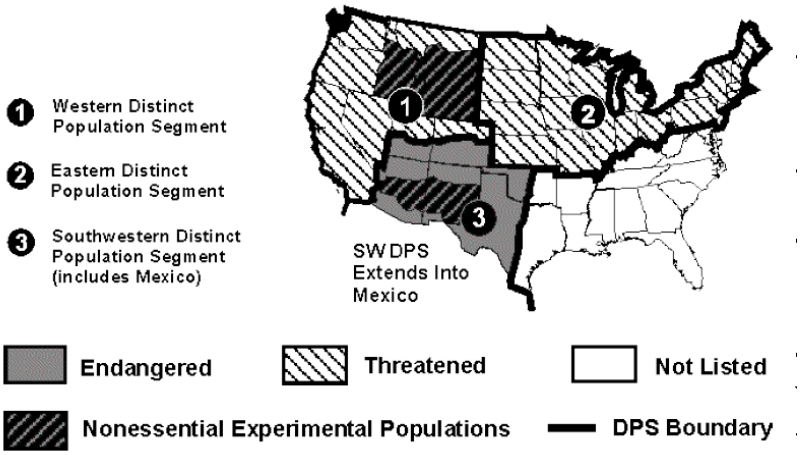
SUPPLEMENTARY MATERIAL #1: A SERIES OF THREE ANNOTATED MAPS

Map 1—Approximate Range (Historic and Current) of Gray Wolves in the Conterminous United States



Before human persecution, gray wolves occupied most of the conterminous United States (blue regions on the map). Currently, gray wolves occupy about 15 percent of their former range (purple regions on the map). The map is taken from Bruskotter et al. (2014) which explains how it would be feasible for wolves to inhabit more geographic range than they currently do. The blackened counties represent areas where wolves and humans would likely not co-exist well, owing to higher human population density. (Note: This map overestimates the size of areas where human population density exceeds 142 people/km^2.)

Map 2—Distinct Population Segments of Gray Wolves Established by the U.S. Fish and Wildlife Service on April 1, 2003

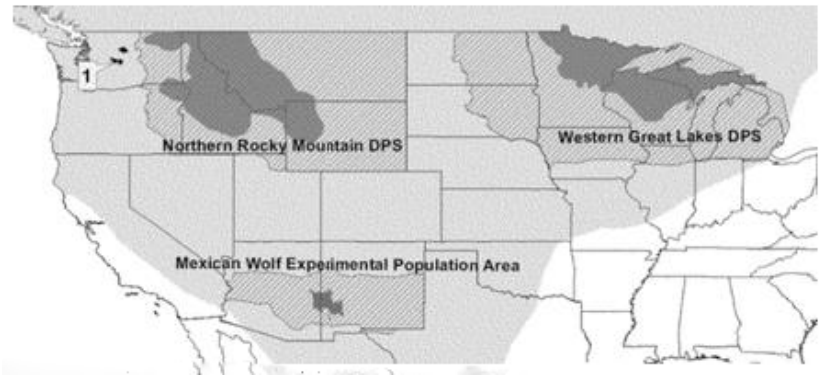


A "distinct population segment" is a listable entity under The Endangered Species Act (ESA). According to FWS policy (61 Fed. Reg. 4722, Feb. 7, 1996) determinations regarding the management of DPSs are to be based on the population's discreteness, its significant to the species to which it belongs, and whether the population would be deemed endangered or threatened if treated as a species.

The DPS provision offers flexibility in recovering species that occupy large geographic ranges. For example, if gray wolves living in the Eastern DPS had reached recovery, but wolves in the southwest DPS had not reached recovery, then wolves in the Eastern DPS could be removed from the list of endangered species and wolves from the southwest DPS could continue receiving the ESA protection necessary for recovery. The DPS policy can also enhance FWS's ability "to address local issues (without the need to list, recover, and consult rangewide) [and] result in a more effective program." *Id*.

The DPSs represented on the map above depict the gray wolves' historic range. The dark hatched areas within the Western DPS and the Southwestern DPS on the map represent areas in which FWS manages gray wolves as nonessential, experimental populations under section 10(j) of the ESA. That provision authorizes the release of an endangered or threatened species or subspecies outside their current range "if the Secretary determines that such release will further the conservation of such species." Section 10(j)(B). Moreover, species managed under Section 10(j) do not receive the full protection otherwise provided by the ESA. For example, an experimental population deemed "not essential to the continued existence of the species," and which is not located within the National Refuge or National Park systems, is treated as a species proposed for listing and the FWS may not designated critical habitat for that population. Section 10(j)(C)(i)–(ii).

Map 3—Revised Distinct Population Segments of Wolves Established by the U.S. Fish and Wildlife Service



The Northern Rocky Mountain DPS was created in April 2009 (74 FR 15123). Except for the state of Wyoming, gray wolves are delisted in this DPS.

The Western Great Lakes DPS was created in December 2011 (76 FR 81665). The Fish and Wildlife Service also delisted wolves in this DPS in December 2011. Three years later, in December 2014, a Federal court ordered the Fish and Wildlife Service to reinstate full ESA protection for wolves living in this DPS.

The most recent census of the wild Mexican wolf population living in Arizona and New Mexico, conducted in December of 2015, found only 97 individuals. Mexican wolves are listed as a subspecies. The Fish and Wildlife Service has been actively working on a recovery plan for Mexican wolves for the past 15 years.

Red wolves are not represented on this map, but are discussed in section 3 of this testimony.

SUPPLEMENTARY MATERIAL #2

The figure below, is taken from Ripple et al. 2014, which was published in *Science*. The figure represents a conceptual summary of 12 scientific publications, and is a conceptual representation of what is known about how wolves influence the health of ecosystems.

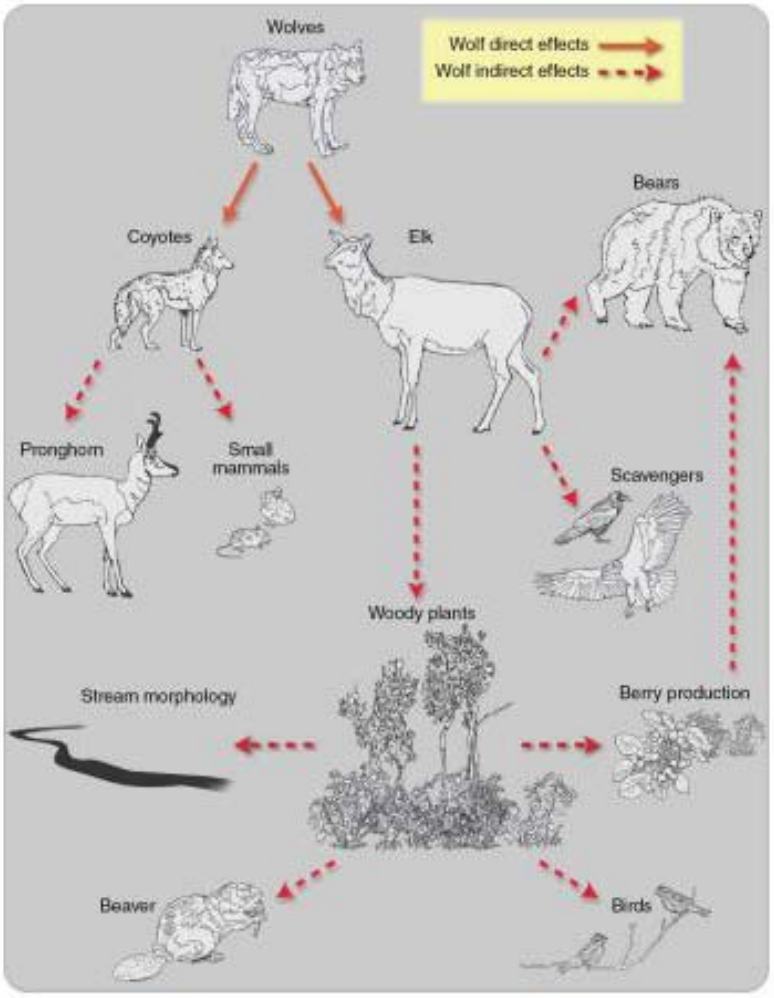


Fig. 4. Conceptual diagram showing direct (solid lines) and indirect (dashed lines) effects of gray wolf reintroduction into the Greater Yellowstone ecosystem. Wolf direct effects have been documented for elk (*96*) and coyotes (*97*), whereas indirect effects have been shown for pronghorn (*98*), small mammals (*99*), woody plants (*100*), stream morphology (*54*), beaver (*55*), birds (*101*), berry production (*63*), scavengers (*53*), and bears (*56*, *63*). This is a simplified diagram, and not all species and trophic interactions are shown. For example, the diagram does not address any potential top-down effects of pumas, bears, and golden eagles (*Aquila chrysaetos*), which are all part of the Yellowstone predator guild where juvenile or adult elk are prey.

SUPPLEMENTARY MATERIAL #3

The figure below is taken from George et al. (2016).

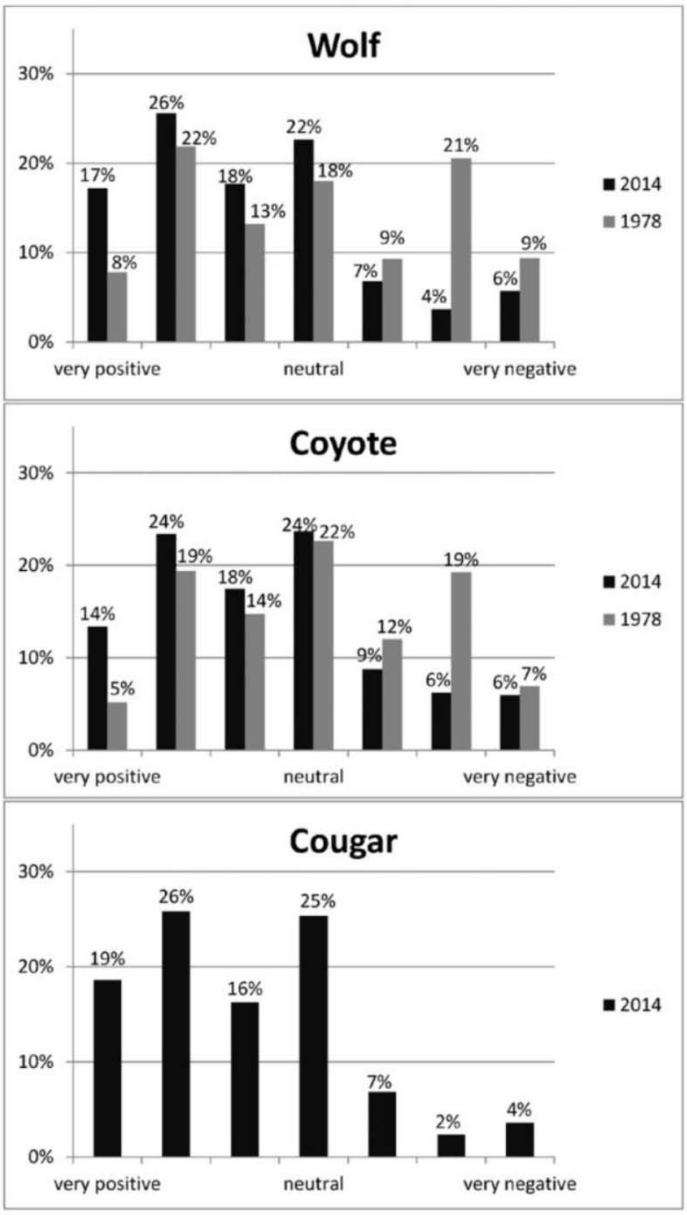


Fig. 1. U.S. Resident's attitudes toward mammalian carnivores: 1978 ($n = 3107$) & 2014 ($n = 1270$). No data for cougar preference were collected in 1978. *Least liked species includes neutral or midpoint (4) on a 1 (strongly like) to 7 (strongly dislike) scale.

QUESTIONS SUBMITTED FOR THE RECORD BY REP. DINGELL TO JOHN A. VUCETICH, PH.D., SCHOOL OF FOREST RESOURCES AND ENVIRONMENTAL SCIENCE, MICHIGAN TECHNOLOGICAL UNIVERSITY

Question 1. You state in your testimony that when Congress legislates species listings and delistings under the ESA it inhibits progress on both conservation of and co-existence with wildlife. Will you please explain what you mean by that?

Answer. When Congress passed the Endangered Species Act (ESA), it set a standard for conserving and co-existing with wildlife that a large majority of Americans clearly support. That widespread support would seem to be on a short-list of ideas that unify Americans in today's divisive political climate. For some species on some occasions, meeting the conservation standards of the ESA is a little more challenging—not overwhelming, just a little more challenging. Americans still support the ESA, even in those more challenging cases.1

Moreover, the Fish and Wildlife Service (FWS) has the expertise and mandate to manage individual species in the context of the ESA and to mount any challenges that may arise along the way in a manner that is both fair-minded and scientifically sound. If the FWS should ever fall short of standards set forth by the ESA, then the Federal courts are the proper place for rectifying such a shortcoming. These processes—led by the FWS and corrected when necessary by the courts—take time. The goodness of government is manifest when those processes are afforded the necessary time.

In contrast to that honored model of governance, Congress has increasingly made efforts to influence the management of individual species in the context of the ESA. These efforts have been motivated by local and special interests aiming for outcomes that do not meet the conservation standards of the ESA. As such, they eviscerate the essential purpose of Federal governance and the ESA, which is to conserve species insomuch as doing so is a national interest. The most constructive role that Congress can play in these circumstances is to encourage and further enable the FWS to fulfill its mandate.

In this way, congressional legislation focused on individual species inhibits progress toward conservation.

These concerns—expressed above in general form—are exemplified by the management of wolves under the ESA and detailed in the subsequent pages of this Q&A section.

Question 2. Can you please speak to the claim that wolves negatively impact deer or other ungulate populations?

Answer. Wolves are not negatively impacting the health or vitality of any deer or elk population. Several considerations indicate that concerns over the impact of wolves on deer and elk hunting are overstated:

1. Healthy wolf populations are vital to the health of ecosystems inhabited by ungulates, as summarized by the image included with my written testimony (see page 53). The figure represents a conceptual summary of 12 scientific publications, and is a conceptual representation of what is known about how wolves influence the health of ecosystems.
2. Ungulates are widely acknowledged—even by scientists working for state wildlife agencies—to be overabundant in many portions of current and historic wolf range. Overabundant ungulate populations are widely understood to be of significant detriment to agriculture, forestry, private property, and human safety (deer-vehicle collisions).
3. Ungulate hunting is successful in all states where wolves live. For example, in 2015 Idaho experienced record high harvest of white-tailed deer and the highest harvest of elk since 1996. The high numbers were not attributed to the state's control of wolf predation, but instead to a series of mild winters (Idaho Fish and Game 2016). Moreover, hunters' dissatisfaction with ungulate harvest, where it occurs, is likely connected less with any discernable effect of wolves and more with ill-informed perceptions of how wolves impact ungulate populations, lack of trust in state wildlife agencies, and unrealistic expectations concerning the harvest levels. It would be valuable for state wildlife agencies to tend those likely sources of dissatisfaction.
4. In many places where ungulates are less abundant, poor habitat is believed to be the limiting factor, not wolf predation.
5. It is normal and healthy for ungulate populations to fluctuate in response to many factors—the most important factors being winter severity, habitat quality, and human hunting. It is a deeply unrealistic expectation to think that ungulate abundance would not fluctuate over time.

Moreover, observing a decline in ungulate abundance is not evidence that wolf predation is the cause of decline. For example, during a congressional oversight hearing held on September 21, Rep. Benishek seemed to suggest that wolf predation was the reason the Michigan Department of Natural Resources has allowed for fewer opportunities to hunt antlerless deer in Upper Michigan in recent years. However, the Michigan Department of Natural Resources indicates those decisions were a response to a string of severe winters that were the primary cause of recent decline in deer abundance (MI-DNR 2016). Three of the last four winters in Upper Michigan have been severe.

6. Wolf predation is a relatively small source of ungulate mortality. For example, information provided by the Wisconsin DNR indicates that hunters kill approximately nine times as many deer than do wolves, vehicle-deer collisions kill approximately the same number of deer as do wolves, starvation in a typical winter kills nearly four times more deer than do wolves. In many cases wolves are killing deer that are less fit and vulnerable to starvation. In the absence of wolves, more deer would likely die of starvation (Wisconsin Department of Natural Resources 2009). Finally, poachers and hunters who do not retrieve the deer they shoot likely kill considerably more deer than do wolves.

   This assumes that wounding losses are about 10 percent of the harvest and that rates of poaching are on the order of 4 percent. Those rates of wounding loss and poaching are consistent with peer-reviewed literature (e.g., Unsworth et al. 1993, Van Deelen et al. 1997, Nixon et al. 2001, Mayer et al. 2002, Grovenburg et al. 2011, McCorquodale et al. 2011). By those rates (10 percent and 4 percent), these sources of deer death are approximately 40–50 percent more than what wolves kill, when considered in conjunction with information presented in Wisconsin DNR (2009).

7. Finally, the views of Carter Niemeyer seem appropriate. Mr. Niemeyer is an avid hunter and served for 6 years as the wolf recovery coordinator for the U.S. Fish & Wildlife Service. He was also a long-time trapper with USDA Wildlife Services, and involved with both lethal and nonlethal control of wolves. Mr. Niemeyer stated in an interview with *Outdoor Idaho*: ". . . I don't think [wolves are] any excuse for not being a successful hunter. There's tremendous numbers of game animals available to sportsman and with a little effort and sleuth, you still have great potential to collect a wild animal from hunting. I don't know what the excuse was before wolves, but it has become the main excuse now for unsuccessful hunters. I mean, there are just so many other issues involved in why hunters are not successful, but the wolf is a lame excuse."

Question 3a. Is the wolf population increasing in the Great Lakes?

Answer. According to records collected and kept by Michigan, Minnesota, and Wisconsin, wolf abundance in the Great Lakes region (MI, WI, MN) has either been stable since 2011 or there is some evidence to suggest that abundance has declined slightly over that time frame. There is no evidence to suggest that wolf abundance in the Great Lakes region has increased since 2011.This perspective of wolf abundance emerges from state-specific trends in wolf abundance as reported by state wildlife agencies in Michigan, Wisconsin, and Minnesota:

1. Wisconsin wolves (representing ~20 percent of the Great Lakes population) having increased in by an estimated 16 percent over recent years.
2. Michigan wolves (representing ~20 percent of the Great Lakes population) having been likely stable in recent years. (Though point estimates of abundance have declined slightly by about 10 percent between 2012 and 2016, from 687 wolves to 618 wolves.)
3. Minnesota wolves (representing ~60 percent of the Great Lakes population) having likely declined by approximately 24 percent in recent years (2008–2013).

No less important than the abovementioned patterns are the following ideas:

1. There are unresolved concerns pertaining to the methods used in Wisconsin for estimating wolf abundance. These concerns give reason to doubt the increase in wolf abundance reported by the state of Wisconsin. These concerns are explained, in part, in Treves et al. (2013).

2. Intense persecution by humans was likely an important contributor to decline in Minnesota. That decline has brought the number of wolves in Minnesota close to state's minimum goal of 1,600 wolves and close to the Federal recovery goal of 1250 to 1400 wolves. That circumstance raises concern about the existence of adequate regulatory mechanisms which is a requirement for delisting.
3. Wolf management should be focused on treating the regularly raised concerns about wolves—livestock depredation, interests pertaining to deer and elk hunting, and perceived threat to human safety. The magnitude of those concerns are not well correlated with fluctuations in wolf abundance. Focusing efforts to manage those concerns on attempts to influence wolf abundance, per se, through hunting or trapping are liable to be ineffectual. For details, see Vucetich et al. (2013).

Question 3b. Are wolves really a threat to livestock in the Great Lakes region, or in other areas where wolves are present?

Answer. According to a 2011 USDA report on cattle death loss, wolf depredation represents less than half of 1 percent of all losses (USDA 2011). For context, about half of all losses are health-related (e.g., digestive problems, respiratory problems, metabolic problems). Losses due to dogs are almost three times as common as wolf-related losses. Criminal losses, due to poisoning and theft, are six times as common as wolf-related losses. These statistics are similar within each of the states inhabited by wolves, i.e., MI, MN, WI, MT, ID, WY, WA, OR, AZ and NM. *Wolves are not a threat to the livestock industry in any state or region of the country.*

One response to the facts described just above is to argue that no industry of any kind should accept losses on the order of 0.5 percent. That response would represent a basic misunderstanding of the circumstance. The circumstance is: *Of the lost cattle*, about 0.5 percent are attributable to wolves*Of existing head of cattle*, some 92 million head, wolves kill approximately one hundredth of 1 percent—tantamount to a rounding error.

An industry interested in managing its losses would tend to focus on larger, higher-ranking sources of loss. Of the 20 categories of loss tracked by the USDA, wolves are the 6th *least* important. For example, even domestic dogs and vultures are each more important sources of loss.

Disturbing images of wolf-killed livestock are sometimes presented as evidence for the failure of efforts to manage wolf-livestock conflicts. This is analogous to presenting emotion-laden images of a car accident as evidence that the Nation's transportation system is, on the whole, a failure. A car wreck and a lost head of livestock are certainly both unfortunate events, but neither is evidence of widespread or systematic failure.

In certain instances, wolves compete with the interests of *individual livestock owners*. Those instances are important. The American people share a burden to assist in these instances. To this end, the states, the FWS, the Department of Agriculture and non-profit organizations all have programs to assist ranchers financially or with tools and management techniques to reduce conflicts with wolves (e.g., range riders, moving female livestock to give birth in safer locations, cleaning up stillborn young, electric fencing, electrified fladry or guard animals). Several varieties of these programs exist, focusing variously on: compensation for livestock losses; cost-share and technical assistance for the use of nonlethal tools that reduce conflict; and incentive payments such as payment for presence of live wolves. These programs are very beneficial. Where there is a need to improve these programs, they should be so improved.

Related to this concern, the legalized killing of carnivores to prevent livestock loss does not have a strong record of effectiveness (Treves et al. 2016). Most studies on the topic conclude that the killing has no positive effect and in some cases a counter-productive effect. Two studies of lethal control offer a countervailing sense. One of these studies concluded that lethal control had a slight effect in reducing depredation (Herfindal et al. 2005) and the other reported a significant reduction (Bradley et al. 2015). The concern is that those results are not reliable because both studies are associated with non-trivial methodological shortcomings (Treves et al. 2016).

Treves et al. (2016) also reviewed studies aimed at assessing the efficacy of nonlethal control. Of the studies reviewed, only two were robustly designed (i.e., random assignment of treatments) and thereby capable of providing reliable inference. One of these studies involved livestock-guarding dogs and the other involved "fladry," a visual deterrent. In both studies the nonlethal control method resulted in reduced depredation.

Question 4. Can you address the premise that liberalizing the culling or trophy hunting of wolves will reduce poaching and livestock loss, and improve the population status of native carnivores?

Answer. Some advocates of wolf hunting assert that increased allowances for legal wolf killing (hunting, lethal control, culling) will reduce poaching and improve attitudes about wolves—thereby improving the conservation status of wolves. This view is not supported by the best-available science nor is it supported by basic moral values.

Best-available science—For example, sociological research focused on hunters and livestock owners living within the geographic range of Wisconsin wolves indicates that those groups were, on the whole, as inclined to poach wolves before the liberalization of legal wolf killing as afterward (Browne-Nunez et al. 2015). These groups also had similarly negative attitudes about wolves, before and after the liberalization of legal wolf killing. The same conclusion is supported by a different study using different research methods (Hogberg et al. 2015). A third study, relying again on different research methods, also found that tolerance for wolves declined and inclination to poach increased throughout an 8-year period during which legal wolf killing was liberalized (Treves et al. 2013). Surveys conducted by the Montana Dept. of Fish and Game also indicate that tolerance for wolves among hunters was similarly low before and after wolf hunting (Pauley 2013).

Those studies focusing on attitudes and behavioral intentions are bolstered by ecological studies suggesting that rates of poaching increased with the liberalization of legal killing in Wisconsin (Chapron and Treves 2016; Treves et al. 2016a). Moreover, the claim that liberalized legal killing of wolves would improve the conservation status of wolves is not supported by the tendency of wolf populations to have declined in response to states' management of legal wolf killing.

Related to this concern, the legalized killing of carnivores to prevent livestock loss does not have a strong record of effectiveness (Treves et al. 2016b). Most studies on the topic conclude that the killing has no positive effect and in some cases a counter-productive effect. Two studies of lethal control offer a countervailing sense. One of these studies concluded that lethal control had a slight effect in reducing depredation (Herfindal et al. 2005) and the other reported a significant reduction (Bradley et al. 2015). The concern is that those results are not reliable because both studies are associated with non-trivial methodological shortcomings (Treves et al. 2016b).

Treves et al. (2016b) also reviewed studies aimed at assessing the efficacy of nonlethal control. Of the studies reviewed, only two were robustly designed (i.e., random assignment of treatments) and thereby capable of providing reliable inference. One of these studies involved livestock-guarding dogs and the other involved "fladry," a visual deterrent. In both studies the nonlethal control method resulted in reduced depredation.

Basic moral values [This section is a synopsis of a portion of Vucetich and Nelson (2014)]—Some advocates of wolf hunting believe that legal wolf hunting would be beneficial to wolf conservation because it would lead to a reduction in rates of poaching by inspiring respect for wolves among those who are currently intolerant. This view is at odds with basic moral values for several reasons:

First, many instances of wolf poaching are wrong because they are primarily motivated by hatred of wolves. These instances of poaching qualify as wrongful deaths, if not a hate crime against nature. To legalize such killings does not make them any less wrong. Moreover, people who threaten to poach wolves unless wolf killing is legalized are engaging a kind of ecological blackmail by threatening harm to wolves unless their demands to kill wolves are met. If poaching is wrong because it represents an adequate reason to kill, then it is not made right simply by legalizing the killing of wolves.

Second, this argument is a perverse misinterpretation of the relationship between respect and hunting. Hunting reinforces or deepens respect for the deer because the hunter knows the deer sacrificed its life for the sustenance of the hunter. In this relationship, respect exists before the hunting; the hunting did not generate respect ex nihilo. In other words, the hunter respects the deer in spite of killing him, not because she killed him. By contrast, the wolf-hater's *a priori* attitude is hatred, not respect. Thus, his killing the wolf is an exercise of hatred—he would likely celebrate the killing. Without moral concern for the wolf, the wolf's sacrifice cannot be recognized. For hunters, recognition of sacrifice is necessary for the realization of respect.

Third, there is a perverted sense in which allowing those who hate wolves to hunt wolves would result in respect for wolves. That is, hatred is *sometimes* dissolved when the hater becomes familiar with his victim, and hunting provides an opportunity to become familiar with the victim. However, if this reasoning were generally

appropriate, killing would be a commonly prescribed therapy for unjustified hatred. It is not.

Wolf intolerance is likely not distinct from other irrational intolerances (such as racism or sexism). That is, no one expects individual wolf haters to change their attitudes. Instead, over time their behaviors become less tolerated and their attitudes become less common. To paraphrase Martin Luther King, the long arc of history bends toward justice.

Question 4 makes reference to whether trophy hunting, in particular, is a proper management tool for wolves. In general, wildlife management is proper when it can provide robust answers to three questions: What is the goal?, Why is the goal appropriate?, and How will planned management actions achieve that goal?. These questions have not been robustly answered in any of the lower 48 states where wolf hunting has occurred. Those instances represent improper wildlife management.

Michigan illustrates the concern, where the stated reason for wolf hunting was to protect livestock and human safety. While protecting human safety and livestock are laudable goals, there is little reason to think that wolf hunting as planned would have alleviated either concern. The weakness of those reasons for wolf hunting lead a reasonable person to believe that the real (unstated) reason to hunt was to mollify hatred for wolves held by a small minority. Hatred is not an acceptable reason to hunt any creature. For a formal account of this perspective on Michigan wolf hunting, see Vucetich et al. (2016).

The properness of wildlife management might also be judged by the North American Model of Wildlife Conservation, which is held in high regard by many hunting organizations, wildlife professionals, and state agencies. A detailed analysis of wolf hunting in Michigan clearly indicates that wolf hunting violates four of the seven principles of the North American Model—i.e., wildlife should only be killed for a legitimate purpose, wildlife is a public trust, and principles of democracy and best-available science. For details, see Vucetich et al. (2016).

In other states, wolf hunting has been motivated, in part, by state game and fish agencies' interest to satisfy a segment of the hunting community. This motivation may be sensible when *all* of the following conditions hold:

- wolves cause an appreciable decline elk or deer abundance;
- wolf hunting (as implemented) results in a significant increase in elk or deer abundance without impairing the health and functioning of the wolf population;
- increased elk or deer abundance will translate to appropriate levels of hunters' satisfaction with their hunting experience; and
- interests to increase ungulate abundance outweigh interest to decrease ungulate abundance.

That all those conditions routinely do not hold is indicated by the following circumstances:

- Ungulate populations in many portions of current and former wolf range are overabundant to the point of causing detriment to agriculture, livestock, forestry, private property, and human safety (deer-vehicle collisions). This circumstance is widely acknowledged by state and Federal wildlife agencies.
- Of the elk populations deemed by state wildlife agencies to be underabundant, poor habitat rather than predation is thought (by state biologists) to be the concern.
- Some state plans for wolf hunting, if implemented, might reduce wolf abundance to the point of increasing ungulate abundance, but would also risk reducing wolf abundance to the point of falling below minimum levels (Wyoming is an example). Other state plans entail essentially no such risk, but also have essentially no chance of resulting in increased ungulate abundance (Michigan is an example).
- Hunting success is relatively high in states such as Idaho and Montana.

Question 5. Are wolves a threat to humans?

Answer. Except in the very rarest of circumstances, wolves are not a threat to human safety. Incidents of wolves harming people are incredibly rare. Wolves generally avoid people and in almost all cases people have nothing to fear from wolves in the wild.

During the oversight hearing held on September 21, 2016, Rep. LaMalfa (CA) mentioned an incident in New Mexico, where parents placed their children in "cages" on the roadside while waiting to be picked up by a school bus. Associate

Professor Daniel MacNulty, wolf expert and close colleague, said of this episode (Berlin 2013),

> ". . . I think people are over-reacting here, as is often the case with wolves . . . wolves are not going to be attacking children at the bus stop. The suggestion that they would is fear-mongering and unhinged from the facts. I think the "kid cages" are a publicity stunt designed to stoke opposition to Mexican wolf recovery in general and to the Federal Government in particular."

I agree with that assessment and I am unaware of any one knowledgeable of wolves who disagrees with that assessment.

Even a casual perusal of press coverage plainly reveals that these "cages" had, prior to any concern about wolves, been serving as "shelters" to protect children from inclement weather (see for example a *Fox News* report by Miller 2013). The shelters were transformed in the public's mind into notorious "cages" after they were portrayed as such by special interests with an opposition to wolves that is not rooted in an accurate understanding of wolves.

In the 21st century, only two known deaths have been attributed to wild wolves in all of North America. There have been no deaths from wolves in the conterminous United States. Far more Americans are killed by bees or dogs than by wolves. Far more Americans are injured or killed in deer-vehicle collisions (U.S. Dept of Transportation). Our overall response to any threat to human safety should be, in part, commensurate with the risk of that threat. Moreover, it should be acknowledged that large carnivores are, on the whole, beneficial to human safety by helping to reduce the number of deer-vehicle collisions (Gilbert et al. 2016).

On the extraordinarily rare occasions when a wolf has appeared to be even potentially problematic, the appropriate agency (state or federal) has moved swiftly to address any possible threat. For example, in May 2015, the Mexican Wolf Interagency Field Team lethally removed a wolf that was exhibiting unusual activity near residents and populations in Catron County, New Mexico.

The false impression that wolves are a threat to human safety is fostered by the interaction between (i) a public that is easily and overly impressed by certain kinds of fear and (ii) those who fabricate or exaggerate the threat that wolves represent. The seriousness of these exaggerations is illustrated with two examples from Michigan:

—A State Senator conveyed a "horrifying and fictional" account of wolves threatening humans. That account was included in a 2011 resolution urging the U.S. Congress to remove ESA protections for gray wolves in Michigan. Later the Senator conceded that the account was not true. See Oosting (2013) for details.

—Adam Bump, an official from the Michigan Department of Natural Resources, "misspoke" when he was interviewed by Michigan Radio (a National Public Radio affiliate) in May 2013. Bump apparently said to the interviewer: "You have wolves showing up in backyards, wolves showing up on porches, wolves staring at people through their sliding glass door while they're pounding on it exhibiting no fear." Later, Bump conceded that this did not happen. See Barnes (2013) for details.

Question 6. Can you further explain why you think wolves should not be delisted?

Answer. A species should not be delisted until it is recovered. A species is recovered when it no longer fits the legal definition of an endangered species, i.e., when it is not "in danger of extinction throughout all or a significant portion of its range" and when the species is unlikely to fit the definition in the foreseeable future. The quoted text is the legal definition of an endangered species as specified in the Endangered Species Act (ESA). That legal definition means that the ESA has at least some restorative mandate beyond ensuring that a species is merely not at risk of extinction. Recovery requires a species to be broadly distributed throughout portions of its historic range.

Those views of recovery are well supported by considerable scholarship (e.g., Vucetich et al. 2006, Tadano 2007, Enzler & Bruskotter 2009, Geenwald 2009, Kamel 2010, Carroll et al. 2010, and Bruskotter et al. 2014, Nelson et al. 2016, and references therein), congressional intent (H.R. Report 412, 93rd Congress, 1973), the history of endangered species legislation in the United States (see the section entitled "Why Focus on Significant Portion of Range?" Vucetich et al. 2006), the Findings section of the ESA (see second from last paragraph of Nelson et al. 2016), and are consistent with numerous decisions made by several Federal courts (e.g., Enzler and Bruskotter 2009).

By this view of recovery, wolves in the conterminous United States are not recovered and should not be delisted because wolves occupy only about 15 percent of their former range.

During the oversight hearing held on September 21, 2016, Rep. Benishek (MI) seemed to indicate that this view of recovery requires a species to occupy all of its former range. The explanation offered above indicates that this plainly not true. Moreover, no one working to better understand the legal meaning of recovery has ever suggested this to be the case. For additional discussion on this point see Nelson et al. (2016).

Some have argued that this view of recovery requires a species to occupy all of its former range. The explanation offered above indicates this plainly not true. Moreover, no one working to better understand the legal meaning of recovery has ever suggested this to be the case. For additional discussion on this point see Nelson et al. (2016).

The FWS recently argued, in a proposed rule, that wolves should be delisted because they currently occupy all of the range that they can possibly occupy (78 Fed. Reg. 35,664). There are two concerns with this position. First, the inability to achieve recovery is not a reason to delist. Second, abundant evidence indicates that wolves could feasibly occupy portions of their former range that they do not currently occupy. For details, see Bruskotter et al. (2014).

The Director of the FWS seems to suggest, in a letter to the editor of the *New York Times* (September 4, 2014) that limited resources available to the FWS are a reason to delist wolves and that delisting wolves would allow the FWS to focus resources on other species in greater need of attention. Limited resources is not an adequate reason to delist a species prior to its being recovered. If limited resources prevent the FWS from actively recovering a species, that species should remain protected by the ESA until the FWS has sufficient resources to actively recover that species. For details, see Nelson and Vucetich (2014).

No less important than the legal meaning of endangerment, is that recovery requires the existence of adequate regulatory mechanisms (Sec. 4(a)(1)(D) of the ESA). There are significant concerns that such mechanisms are not in place. These concerns are reflected, in part, by two Federal courts decisions, one pertaining to Minnesota and Wyoming (*HSUS et al. v. Jewell et al.* 2014. U.S. District Court, D.C. and *Defenders of Wildlife et al. v. Jewell et al.* U.S. District Court, D.C.). Related concerns have been raised for wolves in Wisconsin. [Dr. Adrian Treves of University of Wisconsin and colleagues sent an open letter to the FWS in 2014, describing concerns about use of the best available science in the state of Wisconsin's post delisting monitoring report on gray wolves. http://faculty.nelson.wisc.edu/treves/reports/Letter%20to%20USFWS/Response_to_Acting_Director_Wooley_USFWS.pdf.]

Adequate understanding of what constitutes wolf recovery will require the FWS to:

1. Develop policy on "significant portion of range" that is consistent with the ESA. I believe the courts will eventually decide that the current FWS policy on this topic is inconsistent with the ESA.
2. Develop a robust national plan for wolf conservation and recovery.

Question 7. What are public attitudes currently toward large carnivores, such as wolves?

Answer. Americans' attitudes toward large carnivores, including wolves, are largely positive. Recent research indicates that attitudes toward wolves have become increasingly positive over the past four decades (George et al. 2016). In fact, 3 in 5 Americans hold a positive attitude toward wolves only 1 in 10 Americans have significantly negative attitudes about wolves (George et al. 2016; see figure included with my written testimony (see page 54). Even those living in wolf range have a largely positive attitude about wolves. For example, only 18 percent of non-tribal residents living within the geographic range of wolves in Wisconsin had a very unfavorable view of wolves (Shelley et al. 2011).

Despite widespread positive attitudes about wolves, some have a false impression that the public has a low tolerance for wolves. There are at least three explanations for this misimpression. First, some sociological studies suggest that attitudes toward wolves have become more negative over time; however, these studies tend to focus on hunters, those familiar with hunting, and rural residents living within wolves' range (e.g. Treves et al. 2013, Ericsson & Heberlein 2003). [A poll of attitudes about wolves was conducted by the state of Montana in 2012. The plurality of respondents in that poll expressed being very intolerant of wolves (Montana Fish, Wildlife & Parks 2012). Methodological details of that poll have not, to our knowledge, been subjected to scientific peer-review. A concern with that poll is that the results are

an artifact of disproportionate or misrepresentative sampling.] While it is important to address these attitudes, they are not representative of the interests of most Americans.

Second, other research indicates that biased media coverage gives the impression of low and deteriorating tolerance for wolves. For example, Houston et al. (2010) examined North American news coverage about wolves over a 10-year time period (1999–2008). They found 72 percent of ~30,000 paragraphs they analyzed, represented wolves negatively. They also found that these negative expressions had increased significantly over time. Yet, media's coverage of wolves does not accurately represent Americans' attitudes, and such media bias could lead to distorted perceptions of public opinion (see George et al. 2016).

Third, the perceptions of wildlife professionals working for state agencies may be distorted by interactions with individuals who are not representative of the broader public or even the interest groups to which they belong. An example serves to illustrate: In 2003 the Utah Division of Wildlife Resources hosted a series of scoping meetings concerning wolf management. About 80 percent of the ~900 people who attended those meeting identified "do not allow wolves in Utah" as a management priority. At the same time (i.e., in 2003), a systematic study of attitudes toward wolves found that 74 percent of Utahans exhibited positive attitudes toward wolves.

This case illustrates that state agencies can get the false impression of low support for wolves on the basis of such interactions. The concern is that agencies' contact with the public is not always representative of the public's attitude on the whole, or even of those who care about wildlife conservation issues. This circumstance is regrettable, but understandable, given that scoping meetings, for example, are often attended disproportionately by stakeholders who are especially upset about an issue. This case and these circumstances are detailed in Bruskotter et al. (2007).

With respect to the small segment of Americans with negative attitudes about wolves and other carnivores, there is value in understanding the details of those attitudes. Psychological research indicates that intolerance for wolves (and other large carnivores) may originate from negative emotional reactions toward these species, and perceptions of wolves' impacts that are grossly at odds with scientific knowledge about these species (Slagle et al. 2012, Johannson et al. 2012).

Other sociological research makes the case that poor attitudes about wolves are associated, less so with the perceived negative impact of wolves, and more so with "deep-rooted social identity" (Naughton-Treves et al. 2003; see also Heberlein 2012).

While it is important to ameliorate the financial losses caused by wolves for those few individuals whose animals are actually harmed, doing so is not likely to cause those individuals to have more positive attitudes, as was suggested by Naughton-Treves et al. (2003) and demonstrated longitudinally by Treves et al. 2013, Browne-Nunez et al. 2015, and Hogberg et al. 2015.

A basic principle of wildlife management is that it be based on sound science. For that reason, it would be poor governance to manage a wildlife population on the basis of attitudes about wildlife that are profoundly untethered from scientific knowledge about wildlife. The proper role of government in a case like this is to work to ease the misperceptions of that small segment of Americans.

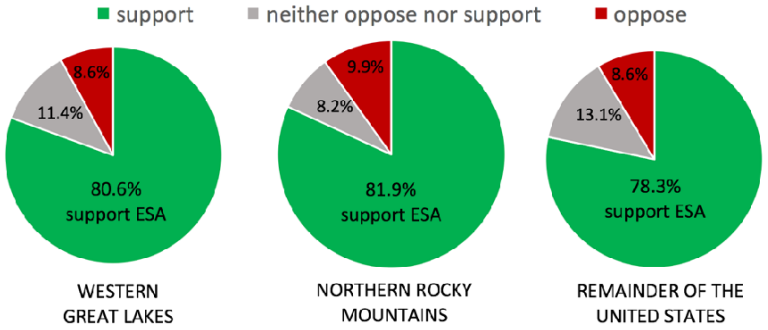
Unfortunately, there are notable examples of state governments working to fuel hatred of wolves and inflame tensions between interest groups. For example, days after Congress delisted wolves in Idaho and Montana, the governor of Idaho declared wolves to be a "disaster emergency" (Zuckerman 2011). That phrasing, "disaster emergency," is usually reserved for truly tragic events such as catastrophic hurricanes and tornadoes.

No less important than positive attitudes about wolves are attitudes about the Endangered Species Act (ESA). Existing data indicate that public support for the ESA is widespread and strong. An earlier, sociological study concluded that four of every five Americans are supportive of the ESA (Czech & Krausman 1997). That study also indicated that 49 percent of respondents believed that ESA should be strengthened. In contrast, only 16 percent believed it should be revoked or weakened.

Some advocates of delisting wolves are concerned that continuing to protect wolves under the ESA will erode public support for the ESA. However, recent polling suggests that attitudes toward the ESA have remained positive over the past two decades. In particular, one poll, conducted in 2015, indicates that approximately four of every five Americans are supportive of the ESA (Harris Interactive 2011). Another recent poll indicates that support for the ESA transcends political ideology. That is, support for the ESA by self-identified liberals, moderates, and conservatives is 96 percent, 94 percent, and 82 percent, respectively (Tulchin Research 2015). Finally, data collected in 2014 by the research firm GfK indicates that attitudes

toward the ESA similarly positive in wolf recovery areas and the remainder of the country (see figure below, J.T. Bruskotter, The Ohio State University, unpublished data).

Support for the Endangered Species Act (ESA) by Region



The values and willpower of the American people, on the whole, support the ESA and wolf conservation. We are also a sufficiently resourceful and generous people, committed to fairly redressing the concerns and negative attitudes held by a small segment of Americans.

LITERATURE CITED

The literature list for this Q&A section is part of the hearing record and is being retained in the Committee's official files.

Mr. GOHMERT. Thank you, Doctor.

At this time, the Chair recognizes Director Sandoval for 5 minutes.

STATEMENT OF ALEXANDRA SANDOVAL, DIRECTOR, NEW MEXICO DEPARTMENT OF GAME & FISH, SANTA FE, NEW MEXICO

Ms. SANDOVAL. Good afternoon, Chairman Gohmert, Ranking Member Dingell, members of the subcommittee. Thank you for the opportunity to appear today to discuss the status of the Federal Government's management of wolves, specifically the Mexican gray wolf.

The state of New Mexico, through the New Mexico State Game Commission and the Department, exercises trust ownership and control over New Mexico's wildlife, including the duty to safeguard the wildlife in the interest of the public.

In our quest to conserve our state's wildlife and recover federally-listed imperiled species, what has proven to be an unnecessary yet significant hurdle is a cloud of uncertainty and added challenges to state self-governance resulting from the U.S. Fish and Wildlife Service's failure to implement section 6 of the Endangered Species Act.

Section 6 mandates that the Service "cooperate to the maximum extent practicable with the states." As written, section 6 contemplates a significant role for the states in the management

and conservation of threatened and endangered species, a role that has yet to be fully recognized in the state of New Mexico.

As you may be aware, the Mexican wolf was first added to the list of endangered species in April of 1976, over 40 years ago. Over these 40 years, the Service has spent over $25 million on the recovery of the sub-species, which to date has not been declared recovered. At last count, less than 100 wolves exist in the wild. While no single factor is to blame for the lack of success recovering the Mexican wolf, one factor looms larger than others: the Service's failure to cooperate with the states.

The Service's various cooperative failures can be broken down into three main categories: first, the imposition of Federal decisions and objections over New Mexico's repeatedly stated concerns; second, the lack of cooperation pertaining to an awareness of social and cultural considerations; and third, the lack of cooperation on wolf releases.

Regarding the first issue, New Mexico has absolutely no confidence that the Service takes seriously the state's concerns, and the only recovery plan for the Mexican wolf, a plan crafted in 1982, the recovery goal was defined as at least 100 wolves in the wild. However, in June of 2013, the Service published a proposed revision to the nonessential experimental population of the Mexican wolf. During that rule revision process, the Department continually asked the Service for a population objective, and was told on every occasion that this number would not be presented until a new recovery plan had been finalized.

Despite the Service's promise that the revised rule would not contain a population objective, the rule, which was finalized in 2015, did contain a numerical target of 300 to 325 wolves across New Mexico and Arizona. The Service not only chose to ignore our concerns, but they also chose to publish a population goal, despite promising New Mexico they would take no such action.

Second, as with any well-planned program, fundamental to its long-term success, is stakeholder support. This is another arena in which the Service has failed. Stakeholder support is particularly paramount when working to recover a carnivore species that can negatively impact livestock operations, wildlife species management, and a host of related issues. The Service has failed in this regard. And, frankly, it is a fatal flaw.

Regarding the third issue, the Service began releasing Mexican wolves in New Mexico in 1998. Releases back then at least had a colorable argument that they were guided by the 1982 recovery plan. Modern releases now occur under the guidance of the 2015 rule. However, that rule itself provides no guidance on the definition of recovery. If a population of 325 wolves is accomplished, would that trigger a delisting? Nobody knows.

New Mexico has zero confidence that, once 325 wolves exist in the wild, the Service will not announce a recovery target of 600 or maybe even 1,000 wolves on the landscape. For years, the Service has moved forward with introduction of the Mexican wolf without the guidance of a current comprehensive science-based recovery plan to frame and inform the effort, and without dedicating sufficient financial or other resources to the program to ensure its success. New Mexico encourages the U.S. Fish and Wildlife Service to

re-examine section 6 of the Endangered Species Act and then redouble its effort at implementation of the cooperative mandate.

Thank you for the opportunity.

[The prepared statement of Ms. Sandoval follows:]

PREPARED STATEMENT OF ALEXANDRA SANDOVAL, DIRECTOR, NEW MEXICO DEPARTMENT OF GAME AND FISH

INTRODUCTION

Chairman Gohmert, Ranking Member Dingell, members of the subcommittee, thank you for the opportunity to appear today to discuss the status of the Federal Government's management of wolves, specifically, the Mexican gray wolf (*Canis lupus baileyi*).

The state of New Mexico, through the New Mexico Game Commission and the Department of Game and Fish, exercises trust ownership and control of New Mexico's wildlife, including "the duty of safeguarding this property in the interest of the public." Cognizant of its trust obligations, the New Mexico legislature has enacted a comprehensive statutory scheme to conserve, manage, and protect New Mexico's wildlife.[1] Together, the Commission and the Department actively manage wildlife across the state, including carnivore species such as the bear and cougar; ungulate species such as deer, elk, bighorn sheep and antelope, which serve as prey to carnivores; and numerous other fish and wildlife species. With over 100 years of experience in restoring and managing wildlife populations across the state, the Department excels at wildlife conservation.

In 1973 Congress established a program for the conservation of threatened and endangered species and a means whereby the ecosystems upon which those species depend may be conserved—the Endangered Species Act (the Act). *See* 16 U.S.C. § 1531(b). It is as true today as it was in 1973, and arguably always has been, that the creation with which we share this earth—fish, wildlife, plants, etc.—are of aesthetic, ecological, educational, historical, recreational, scientific, and I would add spiritual value to our Nation and its people.

We New Mexicans value our wildlife resources and strive to be excellent stewards of this incredible natural resource. One of the species that we are most proud of in New Mexico is the desert bighorn sheep. In 1980, New Mexico's desert bighorn population totaled less than 70 and could only be found in two isolated mountain ranges, prompting the state to add the species to its list of endangered species. Since then, through the tireless efforts of numerous New Mexicans to conserve and increase the number of self-sustaining populations, New Mexico now boasts a population of over 1,000 desert bighorns across at least seven mountain ranges. In 2011 we removed the species from the state endangered species list. Various other once imperiled or extinct resident New Mexican species now thrive or on the path to recovery. We know how to conserve wildlife and, when necessary, recover imperiled species.

In the quest to conserve our wildlife and recover federally listed imperiled species, what has proven to be an unnecessary yet significant hurdle is the cloud of uncertainty and added challenges to state self-governance resulting from the U.S. Fish and Wildlife Service's (Service) failure to implement Section 6 the Endangered Species Act. Section 6 mandates that the Service "cooperate to the maximum extent practicable with the states."[2] Section 6 contemplates a significant role for the states in the management and conservation of threatened and endangered species, a role that has yet to be fully realized.

The constitutional scholar Erwin Chemerinsky identified "state experimentation" as one of the main functions served by the Federalist division of political authority in the United States.[3] The Service's failure to implement Congress' mandate to cooperate with the states has unnecessarily stymied more robust state experimentation in the realm of species recovery. More often than not, through its sans-cooperation implementation of the Endangered Species Act, the Service co-opts species recovery efforts, leaving little or no opportunity for the states to pursue recovery on terms that fit state exigencies and eccentricities. The Mexican wolf recovery program is the cover story in the Service's failure to cooperate story.

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[1] *State ex rel. Sofeico v. Heffernan*, 41 N.M. 219, 227 (1936); N.M. Stat. Ann. §§ 17–1–1 and 17–1–14; *see* N.M. Stat. Ann. §§ 17–1–1 through 17–6–11.

[2] 16 U.S.C. § 1535(a).

[3] Erwin Chemerinsky, Enhancing Government: Federalism for the 21st Century 99 (2009).

BACKGROUND

The Mexican Wolf

The Mexican wolf is the smallest gray wolf subspecies in North America, with an adult weight of 50 to 90 pounds, a length of 5 to 6 feet, and a height at shoulder of 25 to 32 inches. Mexican wolves are typically a patchy black, brown to cinnamon, and cream color, with primarily light underparts. The Mexican wolf's smaller stature is a product of the habitat it occupies. The Mexican wolf historically occupied central and northern Mexico with small reaches into portions of the American Southwest.

As defined by the Service in its 1982 Mexican wolf Recovery Plan, the core historical range of the subspecies was in Mexico, while core historical habitat in the United States was limited to the very southwest corner of New Mexico and the southeast of Arizona. When initially releasing wolves into the wild in 1998 the Service recognized that the reintroduction site in the Blue Range Wolf Recovery Area was at the northern extent of an expanded historical range for the subspecies.

The Mexican gray wolf subspecies was listed as endangered under the Endangered Species Act on April 28, 1976.[4] Subsequently, on March 9, 1978, the entire gray wolf species (*Canis lupus*) in North America south of Canada was listed as endangered, except in Minnesota where it was listed as threatened.[5] The listing of the gray wolf in the contiguous United States and Mexico therefore subsumed the separate listing of the Mexican gray wolf subspecies.[6] In February 2012, the Service recommended that the listing of the entire gray wolf species be revised to reflect the distribution and status of various gray wolf populations. On June 13, 2013, the Service published a proposed rule to delist the gray wolf and maintain protections for the Mexican gray wolf by listing it as an endangered subspecies.[7] The final rule listing the Mexican gray wolf subspecies as endangered was issued on January 16, 2015.[8]

Recovery Planning

The Mexican Wolf Recovery Plan ("Recovery Plan") was adopted in 1982. The Recovery Plan's "prime objective" is "[t]o conserve and ensure the survival of *Canis lupus baileyi* by maintaining a captive breeding program and re-establishing a viable, self-sustaining population of at least 100 Mexican wolves in the middle to high elevations of a 5,000-square mile area within the Mexican wolf's historic range."[9] The Recovery Plan does not contain objective and measurable recovery criteria for delisting as required by section 4(f)(1) of the ESA, other than the 100-wolf and 5,000-square-mile goals referenced above.

The Service has initiated various failed efforts to revise the Recovery Plan. First, in 1995, the Service reported its intent to release a draft revised recovery plan in 1998.[10] A 1998 draft revised Recovery Plan never came to fruition. Later, in 2003, the Service again attempted a revision of the 1982 Recovery Plan, which effort was abandoned. The 2003 effort was followed by a 2010 attempt, which also failed to produce a revised plan. Finally, in 2015, the Service invited the states of New Mexico, Arizona, Colorado, and Utah as well as a variety of independent and contract scientists to a series of working group meetings to contribute to the development of a revised recovery plan. According to the terms of a settlement agreement, which the court has yet to approve, the Service has announced its intention to publish a revised Recovery Plan by the end of November 2017.

While New Mexico is optimistic that the current recovery planning effort will ultimately produce a revised plan, until a revised recovery plan is finalized, the 1982 Recovery Plan will remain the only completed recovery plan for the species, and the now obsolete 100-wolf and 5,000-square-mile objectives will remain the only objective and measurable recovery criteria guiding recovery. Given the lack of current measurable and objective recovery criteria, New Mexico remains in the dark about important recovery questions—how many wolves constitute a recovered population and where these wolves will occur. Forty years into the program, New Mexico should not be as in the dark on these issues as it is.

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[4] 41 Fed. Reg. 17740 (Apr. 28, 1976).
[5] 43 Fed. Reg. 9607 (Mar. 9, 1978).
[6] *Id*.
[7] 78 Fed. Reg. 35664 (Jun. 13, 2013).
[8] 80 Fed. Reg. 2488 (Jan. 16, 2015).
[9] Recovery Plan at 23.
[10] 63 Fed. Reg. 1752, 1753 (Jan. 12, 1998).

Captive Breeding and the 1998 Rule

A binational captive-breeding program between the United States and Mexico was established in the late 1970s, with the capture of the last remaining Mexican wolves in the wild. Referred to as the Mexican Wolf Species Survival Plan, the captive breeding program's ultimate objective is to provide healthy offspring for release into the wild, while conserving the Mexican wolf subspecies genome.[11] The captive breeding program originated with seven founding wolves, and has grown to approximately 248 wolves in 55 facilities in the United States and Mexico.[12] The wolves in the captive population are the only source of animals for release into the wild. The success of the captive breeding program has resulted in surplus animals, allowing the Service to undertake efforts to reintroduce populations of the Mexican wolf into the wild.

On January 12, 1998, the Service published a final rule establishing the Mexican Wolf Experimental Population Area ("MWEPA") in central Arizona, New Mexico, and a small portion of northwestern Texas.[13] In March of 1998, the Service released 11 Mexican wolves from the captive breeding program into the wild.

Under the 1998 Rule, the wolves were released into the Blue Range Wolf Recovery Area ("Blue Range") of Arizona and New Mexico, which is within the MWEPA. Mexican wolves released into the Blue Range and their offspring are designated as a nonessential experimental population, which allows for greater management flexibility to address wolf conflict situations such as livestock depredations and nuisance behavior. The Blue Range is a defined geographic area that encompasses the entire Apache and Gila National Forests and is divided into primary and secondary recovery zones. Under the 1998 Rule, wolves are not allowed to establish territories on public lands wholly outside the Blue Range boundary and must be retrieved by the Service. At the end of 2014, the Service estimated that 110 wolves inhabited the United States in central Arizona and New Mexico, which count exceeded the criteria set out in the Recovery Plan.

The 2015 Rule

When the Service announced its intention to revise the 1998 Rule, the Department communicated its objection to the proposed revision. New Mexico explained that it was nonsensical to modify the 1998 Rule without first updating the now obsolete 1982 Recovery Plan. How could the Service propose a rule that might contemplate hundreds of wolves when the Recovery Plan did not venture beyond 100? The Department stressed to the Service the importance of revising the Recovery Plan to establish what contribution would be required of Mexican wolf historical range in New Mexico and Arizona toward Mexican wolf recovery. The Service moved forward with its revision of the 1998 Rule despite New Mexico's objection.

On January 16, 2015, the Service issued a final rule revising the 1998 Rule.[14] As explained by the Service, the revisions were needed to help "enhance the growth, stability, and success of the experimental population."[15] The 1998 Rule required that Mexican wolves stay within the Blue Range, leading to the removal of wolves that strayed into the larger MWEPA. According to the Service, the 1998 Rule "constrained the number and location of Mexican wolves that can be released from captivity into the wild," "constrain[ed] the growth of the wild population," and "required [the Service] to implement management actions that disrupt social structure."[16] The Service issued the 2015 Rule to modify the geographic boundaries in which Mexican wolves are managed, as well as the management regulations that govern the initial release, translocation, removal, and take of Mexican wolves.[17] In the 2015 Rule, the Service established a population objective of 300 to 325 Mexican wolves within the MWEPA throughout both Arizona and New Mexico.[18] The 2015 Rule includes a population objective that is triple that included in the Recovery Plan for the species and establishes a vastly expanded experimental population area. Whereas the 1998 Rule established an approximately 7,000-square-mile area within which the species could disperse, the 2015 Rule expanded the area by more than an order of magnitude to approximately 154,000 square miles.

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[11] Environmental Impact Statement for the Proposed Revision to the Regulations for the Nonessential Experimental Population of the Mexican Wolf ("Final EIS") (Nov. 2014) at 4.
[12] *Id.*
[13] 63 Fed. Reg. 1752 (Jan. 12, 1998) ("1998 Rule").
[14] 80 Fed. Reg. 2512 (Jan. 16, 2015) ("2015 Rule").
[15] *Id.* at 2518.
[16] *Id.*
[175] *Id.* at 2512.
[18] *Id.* at 2517.

COOPERATION UNDER THE ENDANGERED SPECIES ACT

Section 6(a) of the Act requires that in carrying out the activities authorized by the ESA, the Service cooperate to the maximum extent practicable with the states.[19] Through Section 6, Congress incorporated into the Act principles of cooperative federalism memorialized in the U.S. Constitution. That is, the powers delegated to the Federal Government are few and defined and those which remain in the state governments are numerous and indefinite and extend to all the objects which concern the lives, liberties, and properties of the people, and the internal order, improvement, and prosperity of the states.

Section 6 contemplates a much different cooperative scheme than that posited by the U.S. Fish and Wildlife Service in the Mexican Wolf Recovery Program. The Act's legislative history tells us that Congress's intent in drafting Section 6 was not purely academic. Consider the statement from Senator Tummey (D. Cal), when he called Section 6 "perhaps the most important section" and a similar statement from Senator Stevens (R. AK) when he called Section 6 "the major backbone of the Act." The substance of the provision cannot, or should not, be dismissed by the Service as mere aspirational policy.

The Conference Report for the 1973 Act lends insight into what Congress intended Section 6 to accomplish—"[t]he successful development of an endangered species program will ultimately depend upon a good working arrangement between the Federal agencies, which have broad policy perspective and authority, and the state agencies, which have the physical facilities and the personnel to see that state and Federal endangered species policies are properly executed." While the Act no doubt places ultimate authority in the Federal Government, that authority comes with strings attached, specifically, the strings of relationship building and cooperative interaction with the several states.

The Service appreciates the legal obligations flowing from Section 6 and recognizes them, at least on paper. Consider the Service's pronouncements in its "Revised Interagency Cooperative Policy Regarding the Role of State Agencies in Endangered Species Act Activities," published February of this year (2016)—"[s]tates possess broad trustee and police powers over fish, wildlife, and plants and their habitats within their borders. Unless pre-empted by Federal authority, states possess primary authority and responsibility for protection and management of fish, wildlife, and plants and their habitats." In that same publication, the Service announced a "renewed commitment by the Service and state fish and wildlife agencies to work together in conserving America's imperiled wildlife."

When it comes to putting its words into action, however, the Service often fails to satisfy the cooperative mandate of Section 6, opting instead to shoehorn its square peg version of species recovery into the states' round hole.

THE MEXICAN WOLF, A FAILURE IN COOPERATION

As noted above, the Mexican wolf was first added to the list of endangered species in April of 1976, over 40 years ago. Very few species have held endangered status for as long as the Mexican wolf. Over those 40 years, the Service has spent over $25,000,000 on the recovery of the subspecies.[20] Forty years and $25,000,000 later, one might anticipate that the subspecies is recovered, or in the least something more than a mere 100 wolves in the wild, yet that is all the Service has to show for its time and money. And while no one single factor is to blame for the lack of success recovering the Mexican wolf, one factor looms larger than others, the Service's failure to cooperate with the states. For the sake of brevity, I have categorized the Service's various cooperative failures into three relatively broad categories—(1) lack of cooperation on wolf releases; (2) lack of cooperation pertaining to and awareness of social and cultural considerations; and (3) the imposition of Federal decisions and objectives over New Mexico's stated concerns and objections.

Wolf Releases

The Service first began releasing Mexican wolves in New Mexico in 1998. Releases back then at least had a colorable argument that they were guided by the 1982 Recovery Plan. However, in the context of more recent releases, the Recovery Plan is all but irrelevant. Modern releases occur under the guidance of the 2015 Rule. However, the Rule provides no guidance on the definition of recovery. If a

[19] 16 U.S.C. § 1535(a).

[20] Estimated Funds Expended by Lead Agencies for Mexican Wolf Recovery and Reintroduction, *available at* https://www.fws.gov/southwest/es/mexicanwolf/pdf/MW_Project_Costs_to_Date.pdf.

population of 325 wolves is accomplished, would that trigger a delisting? No one knows. Can New Mexico have any confidence that once 325 wolves exist in the MWEPA, the Service will not announce a recovery target of 600 or 1,000 wolves across the entire state? No, New Mexico can have zero confidence that such a scenario will not occur because the Service has not, despite numerous requests over the last decade from New Mexico, defined what recovery will look like.

While it would seem logical that the Service define its recovery objective prior to implementing a recovery program that contemplates the release of wolves into a state wary of the program, that is not how the Service has managed its program. Somewhat backwardly, the Service opted to release Mexican wolves in Arizona and New Mexico without first defining its recovery objective. Not surprisingly, this caused problems for the states, specifically New Mexico. Time and again the Service failed to reach agreement with the New Mexico Department of Game and Fish, the experts on New Mexico prey densities and awareness of which areas would be most suitable and those most impacted by wolves, regarding release locations.

While New Mexico plugged its nose for the first decade of the release program, in 2011 New Mexico decided enough was enough and declined to participate further in the Service's objectiveless program, meaning it would no longer lend human or financial resources to aid the program. New Mexico simply could not support a program without certainty about what the program sought to achieve. Certainly, the goal was recovery, but what did recovery look like in New Mexico. Would Mexican wolves be limited to the Blue Range or did recovery contemplate wolves across the state? Questions of great import to New Mexico and Mew Mexicans, but seemingly little to the Service.

While New Mexico declined, beginning in 2011, to participate in the recovery program, the Service's own regulation, specifically 43 CFR 24.4(i)(5)(i), still required that the Service comply with New Mexico's permitting requirements prior to releasing wolves in the state. New Mexico continued to grant the Service importation and release permits up until 2015 when, on the heels of the controversial 2015 Rule, the state denied the Service's request to import and release up to 10 wolves into New Mexico. The state's denial was premised on the lack of a current species management plan, i.e. recovery plan, and on the Director's inability to determine that the Service's intended releases would not conflict with the state's conservation management efforts. While the Service's request was to release up to 10 wolves in the state, without a recovery plan informing New Mexico how many more releases were likely necessary and where in the state the Service intended to recover the subspecies, New Mexico was no longer willing to authorize releases.

Upon review of my decision to deny the Service the requested permits, the Game Commission succinctly stated the state's position on wolf releases in New Mexico:

> While the Commission sympathizes with the Service's position—that the denial of release permits effectively slows certain aspects of Mexican wolf recovery—the recovery of Mexican wolves in New Mexico requires careful planning and consideration of myriad issues and the Director's decision that plowing ahead with releases of additional Mexican wolves in New Mexico without first delineating the contours of how, when, where, and how many Mexican wolves will be introduced in New Mexico, i.e. the information that will be developed in a fully vetted recovery plan under the Endangered Species Act, cannot be found to be arbitrary or capricious.

New Mexico's denial of the Service's requested permit did not sit well with the Service. In September of 2015, Director Ashe communicated to New Mexico that "Given the denial of our permit applications, we are left with no option except to continue to move forward with wolf recovery efforts." He continued, "the Service has concluded that it has independent legal authority . . . to engage in all activities regarding the reintroduction of the Mexican wolf in New Mexico. Exercising this authority will allow the Service to import, export, hold and transfer Mexican wolves in the state of New Mexico; and to release wolves on Federal lands in New Mexico without a state permit."

Troubled by the Service's intentions, on April 20, 2016, New Mexico filed a notice of intent to sue the Service to prevent violations of state and Federal law. Three days after receiving New Mexico's notice of intent, and just 2 months after announcing its renewed commitment to working cooperatively with the states, on April 23, 2016, the Service, at perhaps the height of its uncooperative approach, imported two Mexican wolf pups into New Mexico and released them into the wild of Catron County, New Mexico.

One might assume that the Service had at least notified New Mexico about how many wolves would be imported, where they would be released, when they would be released, etc. No such communication occurred. New Mexico only learned of the

releases after they occurred and only because a colleague with the Arizona Department of Game and Fish notified us and because a local media outlet sought New Mexico's comment on the matter. Upon learning of the releases I promptly called the Service's Southwest Regional Director to confirm what I had heard. The Regional Director apologized that I was only just learning of the releases, stating that he had intended to notify the state earlier.

Promptly following the unlawful releases, New Mexico filed a complaint in the U.S. District Court for the District of New Mexico along with a request to enjoin the Service from conducting further releases in violation of state and Federal law. On June 10, 2016, the court granted New Mexico's request and enjoined the Service from releasing any wolves in the state without first complying with state permitting requirements.

In its ruling, the court pointed to the language of the Service's own regulation, which requires that the Service, in carrying out "programs involving reintroduction of fish and wildlife" "shall . . . consult with the states and comply with state permit requirements . . . except in instances where the Secretary of the Interior determines that such compliance would prevent him from carrying out his statutory responsibility."[21] The court disagreed with the Service's argument that it had satisfied the regulation when it applied for the permit, and held that the "clear meaning of compliance with state permitting requirements requires actually receiving a permit and not merely applying for one." Answering the Service's argument that it was exempt from complying with state permitting requirements because doing so would prevent it from fulfilling its statutory duty under the Endangered Species Act to conserve the Mexican wolf, the court held that the Service had no statutory obligation to release a nonessential experimental population. While Section 10(j) of the Act authorized the Service to conduct releases, such was not a statutory responsibility.

Had the Service been more cooperative years ago when New Mexico and others demanded a revised recovery plan prior to the Service moving forward with releases and had the Service been more responsive to state concerns and ideas about when, where, and how many wolves to release, we would likely be at a different place today than where we are—a court ordered injunction preventing the Service from releasing wolves in New Mexico in violation of state and Federal law.

Consideration and Understanding of Local Social and Cultural Issues

As with any well-planned program, fundamental to its long-term success is stakeholder support. This is particularly paramount when working to recover a carnivore species that can negatively impact livestock operations, wildlife species management, and a host of related issues. The Service, since its first release of wolves into the recovery area, has failed to adequately recognize local and state interests, a fatal flaw for the recovery of any species, let alone a carnivore, and has consequently failed to educate relevant stakeholders and ultimately failed to achieve a meaningful level of stakeholder support.

Effective communication and cooperation with local communities has been so greatly deficient that the Office of Inspector General for the U.S. Department of the Interior (OIG) released an investigate report on the Service's Mexican wolf program earlier this year.[22] Of the allegations of misconduct OIG investigated, failure to communicate effectively with the communities impacted by Mexican wolf recovery was one among several others. Without obtaining some level of social tolerance within the communities directly impacted by a recovery program, the program will continue to collapse, as is clearly apparent with the Mexican wolf.

The Department has a record of conserving carnivores, oftentimes in less than friendly environs. When the Department set out to recover and increase populations of bears and cougars across the state, a program that successfully restored these populations from the low hundreds to now thousands, it built programs that recognized impacts to local communities and worked with those communities to find appropriate, workable solutions. We understood that there would be instances in which bears and cougars would kill livestock and in turn we would have to work with the impacted producers to alleviate losses, including, when appropriate, lethal control. As noted in the OIG report, the Service has truly failed in its handling of the nuisance wolf issue, which failure has set in stone a deep-rooted mistrust and rejection of the Service's program.

The Department understands much better than the Service does the issues impacting New Mexican communities where Mexican wolf recovery is occurring. Department employees live within impacted communities, raising families, building

[21] 43 C.F.R. 24.4(i)(5)(i).

[22] Office of Inspector General: U.S. Department of the Interior; Investigative Report of the U.S. Fish and Wildlife Service's Mexican Gray Wolf Program; July 11, 2016.

relationships, and gaining an appreciation for the New Mexican way of life. While the Department and local communities may not always see eye to eye, there is an appreciation that actions have impacts and we have learned to mutually empathize with one another. There is a mutual respect and trust that has developed over a near century of interaction and relationship building. This mutual respect is born from the fact that we are a part of the communities in which we operate and know that we must work cooperatively and not through imposition. The Service must recognize that social tolerance and engagement with local and state-level partners in an honest and transparent manner is the only path to recovery of the Mexican wolf.

The Service's Imposition of its Version of Recovery on New Mexico

Webster's Dictionary defines cooperation as "a situation in which people work together to do something; the actions of someone who is being helpful by doing what is wanted or asked for." The same source defines imposition as "a demand or request that is not reasonable or that causes trouble for someone." Through years of exposure to the Service's Mexican Wolf Recovery Program, it appears that the Service confuses cooperation with imposition. It is the normal course for the state to communicate a concern to the Service or to request some action, e.g. "you should update the Recovery Plan," and for the Service to do exactly what the state had requested it not do or to entirely ignore the stated concern. Consider as an example the Service's effort to revise the 1998 Rule.

On June 13, 2013, the Service published a Proposed Revision to the Nonessential Experimental Population of the Mexican Wolf. During the associated EIS development and rule revision process the Department continually asked the Services for a population objective and was told on every occasion that this number would not be presented until a new recovery plan was finalized. As the steward of New Mexico's wildlife resources, the state importuned the Service for the information it needed to appropriately assess the Service's proposed revisions to the 1998 Rule. The Department could not adequately analyze all "proposed alternatives" and "proposed revisions" during review of the preliminary EIS or proposed rule revisions without knowledge of a population objective. However, nowhere in the draft rule or preliminary EIS did the Service include a target number of wolves to be released into New Mexico or Arizona or an objective of wolves that would eventually inhabit New Mexico and Arizona. Despite the Service's promise that the revised rule would not contain a population objective, the 2015 Rule did contain a numerical target of 300–325 wolves across New Mexico and Arizona.

Where the Service allegedly recognizes that New Mexico "possesses broad trustee and police powers over fish, wildlife, and plants and their habitats within their borders" as well as the "primary authority and responsibility for protection and management of fish, wildlife, and plants and their habitats," and is committed to working cooperatively with the states, one might assume that the Service arrived at the target of 300–325 through consultation and cooperation with New Mexico. That would be a bad assumption. The Service did not consult with New Mexico about the target population. New Mexico learned that the final 10(j) Rule would include a target population of 300–325 wolves in late 2014 after years of asking the Service to release that target number.

The 2015 Rule was not a product of cooperation, but rather an example of Federal imposition. The Service decided how it wanted to manage wolves in New Mexico, and deliberately ignoring New Mexico's concerns and requests, pounded away on the square peg of Mexican wolf recovery.

CONCLUSION

Late last year, the New Mexico Game Commission sat in review of my denial of the Service's permit application. In a submission to the Commission the Service communicated a thinly veiled threat. It said:

> The Supremacy Clause of the United States requires that state laws that 'interfere with or are contrary to,' Federal law be invalidated . . . To the extent that the state's denials of these permits interfere with the Service's ability to in any way manage Mexican wolves in the state of New Mexico, those denials should be overturned. The Secretary would prefer to consult and cooperate with the state of New Mexico regarding this issue and thus apply for and be issued applicable state permits. However, should the Commission decide to not overturn the denials of the Director, and if the Director makes similar decisions in the future, the Secretary could decide that compliance with New Mexico permits applicable to Mexican wolves will prevent her from carrying out her statutory responsibilities.

Echoing what the Commission said in response, it is my observation that the Service employs a definition of cooperation entirely distinct from the term as employed in New Mexico. To the Service, cooperation is applying for and being issued, without question from the state, the applicable state permits, and threatening preemption when it does not issue. What is cooperative about threatening preemption if a state does not issue a permit or ignoring New Mexico's legitimate concerns about the Mexican Wolf Recovery Program and repeated requests for an updated recovery plan? To New Mexico, cooperation involves a dialogue where the Service sees a permit denial for what it is, a big red flag that cooperation has broken down and perhaps an opportunity to introspectively examine the status of your program.

For years the Service has moved forward with introduction efforts in New Mexico without the guidance of a current, comprehensive, science-based recovery plan to frame and inform the effort and without dedicating sufficient financial or other resources to the program to ensure its success. New Mexico withdrew from the recovery program because it grew weary of being an accomplice to an undefined and objectiveless effort. For years New Mexico has implored the Service to develop a recovery plan that would both frame recovery and provide the state with real, objective information that could inform and guide the state's positions and undertakings relative to New Mexico wildlife, including the Mexican wolf.

The Service has repeatedly declared that it is not obligated to develop a revised recovery plan and that legally, the 1982 plan need not be revised. At the same time, however, the Service has acknowledge, from the outset of the 1982 Recovery Plan, that it was inadequate as a recovery document and that revision was necessary. In New Mexico we are not interested in the legal nuances of whether the Service is obligated to develop a recovery plan for the Mexican wolf. What we are interested in is recovering the species in its historic range and until a valid recovery plan is developed, that will be nothing more than a permanently elusive dream.

The 93rd Congress envisioned an implementation of the Endangered Species Act far different from the Service's current approach with the Mexican wolf. Section 6 of the Act requires the Service to "cooperate to the maximum extent practicable with the states" and those Members of Congress in 1973 that spoke of Section 6 as "perhaps the most important section" and "the major backbone of the Act" certainly envisioned something more significant and meaningful in terms of cooperation than the Service applying for a state permit but then barreling forward without it when it did not issue.

New Mexico objects to the Service's historical dismissiveness of New Mexican ideas and concerns regarding the recovery of the Mexican wolf in our state; to its illegal attempt to release Mexican wolves in our state without state approval; and to attempting to recover the Mexican wolf without first developing a fully vetted, science-based recovery plan to guide and frame recovery efforts.

In short, New Mexico encourages the U.S. Fish and Wildlife Service to re-examine Section 6 of the Endangered Species Act and then redouble its efforts at implementation of the cooperative mandate.

Mr. GOHMERT. Thank you, Director. At this time, Mr. Bean, you are recognized for 5 minutes.

STATEMENT OF BRIAN BEAN, OWNER, LAVA LAKE LAND & LIVESTOCK LLC, AND LAVA LAMB, HAILEY, IDAHO

Mr. BEAN. Chairman Gohmert, Ranking Member Dingell, and members of the committee, thank you for the opportunity to testify.

Wolves kill nearly double the number of the sheep than any other type of livestock in the Northern Rockies. The Wood River Wolf Project, a collaborative consisting of producers, county commissioners, wildlife managers, wildlife advocates, public lands managers, and wildlife services, was created to determine if we could proactively use nonlethal tools and techniques to significantly reduce losses of sheep to wolves, while reducing lethal control of wolves across a large, rugged, and primarily forested landscape.

Our goal was to evaluate the holistic strategy of increasing human presence, providing more diligent sheep management, utilizing a variety of nonlethal techniques in a proactive and adaptive

fashion. We used a range of nonlethal deterrents, including multiple livestock guardian dogs, temporary fencing, lighting, sound devices, and more, depending on the situation.

Over the 7-year study period, 10,000 to 20,000 sheep grazed annually in the project area. On average, fewer than five sheep were killed by wolves per year. Sheep depredation losses to wolves were 3.5 times higher in the adjacent non-protected area than in the project area. No wolves were lethally controlled within the project area, and sheep depredation losses to wolves were just 0.02 percent of the total number of sheep present, the lowest loss rate among sheep grazing areas in wolf range, statewide.

The Wood River Wolf Project, therefore, provides evidence that proactive use of a variety of inexpensive, nonlethal techniques can significantly minimize livestock losses on large, open rangeland operations. If a coalition with limited resources can produce these results on the ground, I believe similar outcomes are possible in other western states, where wolf and livestock conflicts exist.

Why should a producer be interested in learning about nonlethal techniques? The phone call to request a lethal control action is essentially free to the producer. The costs of lethal control are considerable, but are not borne by the producer, but by Federal taxpayers and, in at least one case, state taxpayers. Although there are disturbing exceptions, a lethal control request is legitimized if livestock have been killed.

Has the producer then incurred an economic loss? Certainly. But Federal funding, typically administered by state agencies, is available to compensate the producer for those livestock losses. If fully compensated, the producer has not incurred a net economic loss for livestock killed by wolves, and has not participated at all in the cost of lethal control. In essence, then, from the producer's perspective, current policy makes it low-risk, easy, and free to request lethal control.

But it is not really free, is it? The ratio of the cost of lethal control of wolves to the value of livestock killed can range from 2-to-3 or 4-to-1 to 35-to-1 or more. Furthermore, depredation by coyotes on sheep is a much greater economic issue for most range sheep operators than depredation by wolves. For Lava Lake, that ratio approaches 10 animals killed by coyotes to 1 animal, on average, killed by wolves.

Consider what producers would do if they were required to pay for lethal control of wolves on public land. Would they continue to request lethal control and incur those costs, or would they try nonlethal and prevent or reduce depredation in the first instance?

In my experience, sheep and cattle producers that operate on public lands believe two things that are relevant to this subcommittee. Number one, their Federal congressional delegations have been largely successful over many decades in protecting their grazing preferences on public lands, and are likely to continue to be effective going forward. Number two, they need not be concerned about economic backlash from consumers of their products if they request lethal control. I believe that the latter is largely true.

In most circumstances, it would be exceedingly difficult and time-consuming for the concerned consumer to boycott protein products derived from livestock raised by producers who elect to request

lethal control actions on wolves. The former, however—that is, Federal congressional delegations continuing to be effective in protecting grazing preferences—bears closer examination. I think that we are increasingly at risk of a disenfranchisement by the public in terms of our public grazing use; and that disenfranchisement would be catastrophic for producers, because nearly every operator that I know would not be able to continue to operate on their deeded lands alone.

Thank you again for the opportunity to testify.

[The prepared statement of Mr. Bean follows:]

PREPARED STATEMENT OF BRIAN S. BEAN, PRESIDENT, LAVA LAKE LAND & LIVESTOCK, LLC

I co-founded and co-own Lava Lake Land & Livestock, which raises sheep and cattle on 875,000 acres of public and private rangeland in south-central Idaho near Craters of the Moon. I co-founded and co-own Lava Lake Lamb, which sells 100% grass-fed and grass-finished lamb nationally. I serve as President of the Lava Lake Institute for Science & Conservation, an Idaho 501(c)(3) which serves as the fiscal agent for the Wood River Wolf Project, a collaborative whose mission is to reduce or eliminate wolf depredation on sheep and consequently reduce or eliminate lethal control requests on wolves in our Project Area.

WOOD RIVER WOLF PROJECT

Collaborative approaches to preventing wolf depredation on livestock, like the Wood River Wolf Project (a sheep-centric project in south-central Idaho), reduce the effort and cost attendant to protecting livestock from apex predators.

To date, there have been few landscape-scale trials of nonlethal deterrents in overlapping wolf and livestock range, and none that involved thousands of sheep in rugged national forest conditions. Because wolves kill nearly double the number of sheep than any other type of livestock in the northern Rockies, including in Idaho (USFWS 2015)[1], the goal of the Wood River Wolf Project was to determine if we could proactively and adaptively use nonlethal tools and techniques to significantly reduce losses of sheep to wolves while reducing lethal control of wolves across a large, rugged and primarily forested landscape. Based on data generated by the Project, we compared the rate of sheep lost to wolf depredation in a project area where nonlethal preventative measures were implemented, and a non-protected area, over 7 years starting in 2008. The Project Area and adjacent Non-Protected Area were comparable in that both were on National Forest lands in areas occupied by wolves and with a history of wolf depredation on sheep.

Our goal was not to evaluate any single tool but rather to evaluate the holistic strategy of increasing the presence of humans, more diligent management of sheep and utilizing a variety of nonlethal techniques in a proactive and adaptive fashion. As such, we used a range of common-sense nonlethal deterrents including multiple livestock guardian dogs, temporary fencing, lighting, sound devices and more, depending on the situation.

Over the 7-year study period, of the 10,000 to 20,000 sheep grazed annually in the Demonstration Project Area, on average fewer than 5 sheep were killed by wolves per year—less than 30 sheep in total. Furthermore, sheep depredation losses to wolves were 3.5 times higher in the Non-Protected Area than in the Project Area. In addition, no wolves were lethally controlled within the Project Area and sheep depredation losses to wolves were just 0.02 percent of the total number of sheep present, the lowest loss rate among sheep grazing areas in wolf range statewide.

The Wood River Wolf Project provides evidence that proactive use of a variety of inexpensive nonlethal techniques used adaptively can help significantly minimize livestock losses on large open rangeland operations. As such, the Project has been endorsed by Blaine County and is ongoing today (the ninth season) under the fiscal agency of the Lava Lake Institute for Science & Conservation.

If a coalition consisting of local sheep producers, county commissioners, wildlife conservation organizations, Federal land managers, the state wildlife management agency and Federal biologists working collaboratively with limited resources can

[1] https://www.fws.gov/mountain-prairie/es/species/mammals/wolf/2016/FINAL_Table7b-7c_DepState_2015%20(1).pdf.

produce these results on the ground, then I believe similar outcomes are possible in other states where wolf and livestock conflicts exist.

SHEEP

Clearly, based on the results of the Wood River Wolf Project as outlined above, nonlethal preventive measures, including tools and behaviors, can be effective in western states to prevent or reduce wolf depredation on sheep.

CATTLE

Figuring out how to prevent wolf depredation on cattle on western rangelands has proven more difficult and has taken longer than similar efforts with sheep. Nevertheless, much progress has been made over the last 4 or 5 years.

Sheep exhibit a banding instinct and are typically accompanied by herders on western rangelands. Cattle do not have the same banding instinct and are typically pastured, not herded. Over the course of 80 years or so of raising cattle in country that no longer supported wolves, cattle largely lost their defensive behaviors when confronted by that reintroduced or re-colonizing predator. In addition, polled (hornless) cattle breeds are preferred by most producers today, reducing the ability of cattle to defend themselves against wolves.

"Re-wilding" cattle refers to the reinforcement of defensive behaviors, including bunching, in the face of wolf depredation. In addition, range riding has proven effective in the Tom Miner Basin and Centennial Valley in Montana. (In the latter location, range riding also involves protecting cattle from depredation by grizzly bears.) As with sheep, the costs per head associated with nonlethal control may be reduced through collaborations involving several producers.

Range riding is yielding an unexpected additional economic benefit: sick or injured cattle, including calves, are typically found and treated earlier, reducing normal death loss. In addition, range riders, if properly trained, are able to move cattle and make better use of forage resources, resulting in fewer "hot spots" and more even range utilization.

BEHAVIORAL ECONOMICS

Generally speaking, livestock production is a low margin business. Participants in low margin businesses typically have limited capacity to assume incremental risk and are therefore more risk averse, generally, than participants in high margin businesses. Producers perceive changes in production protocol to be inherently risky. Learning how to effectively deploy nonlethal deterrents to wolf depredation is clearly a change in protocol. As a consequence, nonlethal buy-in is seen as risky and is resisted by many producers as a consequence.

Why should a producer be interested in learning about nonlethal techniques, training his herders, or cowboys (including range riders), investing in equipment and deploying tools in the field? Why, indeed. The phone call to request a lethal control action is essentially free to the producer. The costs of lethal control are considerable but are not borne by the producer, but by Federal and, in at least one case, state taxpayers. Although there are disturbing exceptions, a lethal control request is legitimized if livestock have been killed. Hasn't the producer then incurred an economic loss? Certainly. But Federal funding, typically administered by state agencies, is available to compensate the producer for those livestock losses. If fully compensated, the producer *has not incurred a net economic loss for livestock killed* by wolves, and *has not participated at all in the cost of lethal control*.

In essence, then, from the producer's perspective, it is *low-risk, easy and free* to request lethal control.

EMPHASIS ON LETHAL CONTROL

After Federal (legislative) delisting (under ESA) of the northern Rockies' (tri-state) "experimental, nonessential" (reintroduced) gray wolf population, the emphasis on "managing wolves" has been a *de facto* emphasis on killing wolves—as opposed to the implementation of nonlethal control measures. For example, in Idaho, the Wolf Depredation Control Fund, administered by a Board consisting largely of members appointed by Idaho's governor or by those appointed by the governor, expressly stipulates that every dollar of this $2,000,000 appropriation (involving $400,000 authorized by the state legislature every year for 5 years) must be used to *kill* wolves. In other words, the Wolf Depredation Control Fund can not be used to support the use of nonlethal measures.

There are several sources of funding for the Wolf Depredation Control Fund; I note that some funding comes from producers' livestock and wool sales, so that even

those operators who have found nonlethal deterrents to be effective, and prefer to use them, such as Lava Lake Land & Livestock, for economic or ecological reasons, find that they do in fact economically support killing wolves in response to depredation events whether they wish to or not.

Notwithstanding the above, some states recently colonized by gray wolves do place more emphasis on the implementation of nonlethal measures to reduce or prevent wolf depredation on livestock.

Oregon has been among the most progressive states in wolf conservation and management in the United States. "Under the Oregon Wolf Plan, in all phases of wolf management, nonlethal preventive measures to prevent wolf-livestock conflict remain the first choice of Oregon wildlife managers. These nonlethal preventive measures are required in all phases of wolf management before ODFW [Oregon Department of Fish and Wildlife] would consider lethal control of wolves due to livestock depredation." See: http://www.dfw.state.or.us/wolves/faq.asp.

The Oregon Wolf Plan "mandates focusing on nonlethal efforts before lethal removal is considered. Though the wolf population has increased significantly over the last 7 years, depredation events and livestock losses have stayed relatively stable." The 2015 Oregon Wolf Annual Report states: "Overall, confirmed incidents of depredation decreased in 2015 from the previous year (9 vs. 11), and the number of losses also decreased . . . Confirmed losses in 2015 were 3 cattle, 10 sheep, and 1 livestock working dog . . ." (2015 Oregon Wolf Annual Report).

The Department's dedication, hard work and genuine transparency have demonstrated that wolves and livestock can co-exist with minimal losses when nonlethal methods and strategies are effectively implemented.

LETHAL CONTROL ON PUBLIC LANDS

In my experience, sheep and cattle producers that operate on public lands believe two things that are relevant to this testimony: (i) that their Federal congressional delegations have been largely successful over many decades in protecting their grazing preferences on public lands and *are likely to continue to be effective* and (ii) they needn't be concerned about economic backlash from consumers of their products if they request lethal control.

The latter is true, in my opinion; despite USDA's Source Verification program, which theoretically allows a consumer or FSIS (USDA's Food Safety and Inspection Service) to retrace a T-bone steak back to the rancher who raised the steer, this is usually quite difficult, at least for the consumer. Ask yourself, "How would I go about finding out where the cut steak in the meat case in my local market or butcher shop came from?" It's one thing for Michael Pollan to trace steer No. 534 downstream, quite another to swim back upstream and finger the producer that raised the animal. As a consequence, it would in most circumstances be exceedingly difficult and time consuming for the concerned consumer to boycott protein products derived from livestock raised by producers who elect to request lethal control actions on wolves—unless those producers are publicly associated with a particular brand, which would likely be economic suicide.

The former, however, bears closer examination. It is true that the congressional delegations of western states have been largely effective in protecting the interests of public lands grazers since the Taylor Grazing Act was passed in 1934, or earlier. In my opinion, it is not necessarily the case that that support will continue to be as effective. At the end of the day, public lands grazers operate on the public domain at the discretion of the public. This isn't the early 19th century when most Americans lived on the farm, nor the early 20th century when 30 percent of Americans were still tied to agricultural pursuits. Today, in the early 21st century, fewer than 2 percent of Americans are farmers or ranchers.

Notwithstanding the fact that tens of millions of Americans have never stepped foot on a farm or ranch and some believe that milk comes from a carton, the majority of Americans like wildlife and believe that predators deserve a place on the landscape. These Americans will stand up for wildlife—including wolves and other apex predators—and vote their beliefs.

The shrewd producer, in my opinion, recognizes the risk of public lands grazing disenfranchisement by a public that in frustration concludes that *the only way to eliminate behaviors they find objectionable is to dismantle the whole shebang*—politically. The facts that a lethal control request is free to the producer and that producers in many states are compensated for livestock lost to wolves in no way make up for the risk of losing it all, because most public lands grazing operations could not survive solely on their deeded (privately owned) lands.

DEPREDATION AND LETHAL CONTROL ECONOMICS

The Profanity Peak Pack (Washington State) kill order contemplates the lethal control of all 11 wolves in the pack. From July 8 to September 16, 2016, 13 cattle were killed or injured by wolves (8 confirmed and 5 probable). Six wolves (5 adults and 1 pup) have so far been killed.

A steer or heifer at a finished slaughter weight of roughly 1,350 lbs on average was worth $1,553 per hd at $1.15 per live-weight lb (as of August 25). The cost of killing a wolf varies. If a USDA APHIS Wildlife Services trapper tasked with executing the kill mandate requested by an affected producer and authorized by the cognizant state wildlife management agency is lucky and kills a wolf on the ground with a rifle, the expense is salary and benefits, fuel, overhead and the cost of a bullet, a few hundred dollars to a few thousand. If, as is often the case, a wolf is killed via aerial gunning, costs would include roughly $1,500 per hour for the aircraft, plus the cost of the pilot and sharpshooter, etc. The cost of lethal control by aerial gunning can be $11,000 per wolf. A reasonable estimate of cost is $7,000 per wolf killed, but can be much higher. $7,000 (paid by the taxpayer) divided by $1,553 (when reimbursed, also paid by the taxpayer) is 4.5×. Let's reduce that to 4×.

In practice, depredation events involving wolves that result in the loss of a few head of livestock increasingly result in kill mandates, typically executed by Wildlife Services, that contemplate the removal of entire packs. I refer to this phenomenon as "disproportionate response." To illustrate, if seven sheep are killed by wolves in a single depredation event or multiple events involving the same operator, and those sheep (running-age ewes or lambs, as the case may be) are worth $200 each, for a total of $1,400 in economic loss, the kill order may involve all seven wolves in a pack and may cost taxpayers as much as $50,000 or more. The dollar ratio in this illustration is 35:1.

Continuing the illustration, let's say that the same producer has 10,000 breeding ewes which produce, on average, 1.4 lambs. Thus, the producer is managing about 24,000 animals during the spring and summer grazing season. It is not unreasonable to assume a disappearance loss (lambs only) of 4.5 percent (630 lambs) during the grazing season, mostly from predators and most of that from coyotes. In this illustration, if 85 percent of the disappearance loss is due to depredation and 70 percent of the depredation loss is inflicted by coyotes, that producer has lost 375 lambs to coyotes before weaning. If that producer suffered as many as 20 lambs killed by wolves that same season, the ratio of loss due to coyote depredation to loss due to wolf depredation would be more than 18 to 1. The uncomfortable reality is that depredation by coyotes on sheep (including ewes) is a much greater economic issue for most range sheep operators than depredation by wolves.

Pause to consider what producers would do if they were required to pay for lethal control of wolves on public land. Continue to request lethal control? Or try nonlethal and prevent or reduce depredation in the first place? I assume here that producers would still be compensated for livestock lost to wolves.

I raise these questions because a debate is raging in the media today about killing wolves on public land. As is usually the case where the gray wolf is concerned, the debate is dogmatic, polarized and frequently vitriolic. The topics of discussion vary from the rationale and legitimacy of killing wolves in a congressionally-designated wilderness—to reduce the number of "huntable" wild ungulates killed by wolves—to the acceptability of providing expensive predator management services gratis to public lands grazers who are seen by many citizens to benefit already from what are assumed to be subsidized grazing fees on Federal lands.

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I am grateful to be able to provide this testimony. When I return to Idaho, I will doubtless have the results of the forensic analysis conducted by our Wildlife Services trapper on the depredation of one of our slaughter-weight steers at Lava Lake Ranch last weekend. Lion or wolf? For us, whatever the answer, it will be a reminder that we need to maintain vigilance, and that evolving the efficacy of nonlethal control measures will benefit Lava Lake and others committed to the proposition that predator co-existence is not only possible, but also risk mitigating.

Mr. GOHMERT. Thank you.

Mr. Paterson, you are recognized for 5 minutes.

STATEMENT OF TOM PATERSON, OWNER, SPUR RANCH CATTLE COMPANY LLC, LUNA, NEW MEXICO

Mr. PATERSON. Chairman Gohmert, Ranking Member Dingell, members of the subcommittee, the Spur Ranch Cattle Company is located on both sides of the Arizona-New Mexico State line. It is about a third of the way up from Mexico to Colorado. We are on what is known as the Outlaw Trail. This is rough, mountainous country. Our elevation ranges from 4,500 feet to 9,000 feet.

We now run about 500 head of mother cows on 125,000 acres of Federal grazing leases. That is about a fifth the size of Rhode Island. Our pastures range in size from a 1,000-acre breeding traps to our largest pastures, which are about 20,000 acres. We run commercial cows and registered black Angus, Simmental, and some Angus bulls. We endeavor to give our cattle the best care possible.

I am here today to address the Mexican gray wolf program as experienced in Mexico and Arizona. I wouldn't pretend to speak about the wolf experience elsewhere.

This year, 2016, has been a wreck because of losses to our cattle from the wolves. So far this year we know we have lost four cows and five calves to the wolves. But the practical challenge that we face is that we will never really know how many other wolf kills we have had. The kills that we find are in our smallest pastures. You do not find them in pastures that are many thousands of acres large. By the time the varmints are done with a carcass, we don't even find the plastic ear tag. Research results vary, and individual situations will differ, but an estimate from the Fish and Wildlife Service is that for every wolf kill you find, there are at least five that you don't.

On top of that is the loss we suffer from reduced conception rates on our cows. Based on research from the University of Nebraska, we estimate that our conception rate is about 10 percent less than what it should be, given the condition on our cows. That, we believe, is a result of wolves running our cows and keeping them out of estrus.

In the prepared remarks that we have submitted, I have tried to give you detail about the wolf kills we have had during 2016. In paragraph 22(a) of my written testimony you will read about a kill we reported on June 4. It is up on the monitor. That episode shows that the Fish and Wildlife Service does a poor job helping ranchers haze wolves away from our cattle if it is on a weekend, when the wolves work but Fish and Wildlife Service employees do not.

The wolf, in that case, most likely went after a young calf. The cow intervened. The wolf bit the cow under her armpit and immobilized her. She went down, paralyzed. The wolf ate on her from the rear end forward, while she bled to death. That wolf killed a cow and orphaned her calf. The baby calf is too young to survive. We lost both the cow and the calf. We get paid for the cow. Last Friday, I was told we do not get paid for the calf, because the wolf only orphaned the calf, it did not kill it.

In paragraph 22(b) of my testimony, you will read about two other kills we get no compensation for. That experience demonstrates a willingness on the part of the FWS investigators to fiddle with the truth. It also shows the incredible burden on ranchers

to prove that we have a wolf kill. That is what you call a conflict with livestock. That is actually a wolf kill.

And, there is more. As we report in paragraph 22(c) of our materials, a week after we had a number of wolf kills on our south ranch, we had another kill on our north ranch. A wolf from the Buckaloo Pack killed a cow/calf pair in that pasture.

Could we go to the last slide? They confirmed the calf was a wolf kill, but the cow which the wolves chased into a bog hole where it died was only a probable kill. That is the cow. That is the bog hole. She had two creeks running right beside her, and she headed for the bog hole. That is where she died.

Let's go to the next picture. Upper left, that is the calf. That is what a calf looks like. That is a wolf conflict with livestock. That is what a calf looks like after a wolf's got it.

I ask that you would review the specific examples we have shared with you, the cost to us this year, over $116,000 uncompensated cost to the Spur Ranch Cattle Company, before you include what it is costing us for decreased weights on our calves.

Mr. GOHMERT. Thank you.

[The prepared statement of Mr. Paterson follows:]

PREPARED STATEMENT OF THOMAS W. PATERSON, SPUR RANCH CATTLE CO. LLC

WHO WE ARE, WHERE AND WHAT WE DO

I represent the Spur Ranch Cattle Co. LLC. The owners are my wife, Callie, our daughters, Lindsay and Caroline, and myself. Majority rules, and I don't control a majority. Callie has a BBA in accounting and an MBA in Tax from the University of Texas. She's a CPA. Lindsay was graduated from Yale in 2014. She's an associate with Riverstone Holdings in New York City doing energy private equity. Caroline was graduated from Sewanee: the University of the South last May. She's an economist with Alvarez & Marsal in Houston. I'm from Clifton, Arizona. I was graduated from high school in Silver City, New Mexico, did my undergraduate in Agricultural Economics at Texas A&M, got my masters and Ph.D. in Ag Economics and a law degree from the University of Wisconsin. I've practiced law for going on 32 years. I'm a partner with Susman Godfrey in Houston. I'm licensed in Texas and New Mexico. I practice oil and gas. I'm at the ranch about a week each month. When I'm not, I spend about 25 hours a week on ranch business. Our ranch crew includes our south ranch foreman, Clint Fischler. He lives with his family on the South Ranch 6 miles west of Alma. Clint has years of experience working cattle. We've got a couple fellows helping Clint. The foreman position for the north ranch near Luna is currently open.

We are located on both sides of Arizona/New Mexico line, about a third of the way up from Mexico to Colorado. This is rough, mountainous country. Our elevation ranges from 4,500 feet to 9,000 feet. It's easy for cattle to hide. Geronimo was born not far away. According to Captain French in his book *Recollections of a Western Ranchman*, it's where the Apache went when they jumped the reservation at San Carlos in the 1800s. It's also on what's known as the Outlaw Trail. Think Butch Cassidy and the Sundance Kid. They once worked on the WS Ranch in this area before the Pinkerton agents swooped in.

We now run about 500 head of mother cows on 125,000 acres of Federal grazing leases. To put that in perspective, that's about a fifth the size of Rhode Island. We have a north ranch for summer grazing and a south ranch for year-long and winter grazing. Much of our south ranch is formally designated primitive. It is part of the Blue Range Primitive Area. It is administered as if it is Wilderness. We also use about a section or 640 acres of private land. The pastures range in size from our smallest, which are a couple section breeding traps to our largest, which is over 30 sections or about 20,000 acres. The pastures on the south ranch in primitive area are accessible only by horseback or on foot.

We run our cattle near the communities of Luna and Alma, New Mexico and Alpine and Blue, Arizona. When you stand on top of Maple Peak in the southwest corner of our south ranch, you can see the tailings dam at Morenci, Arizona, about 30 miles away.

We are active and aggressive conservationists. The Spur Ranch Safe Harbor Agreement was among the first in our region between USFWS and a private landowner. Through the Spur Ranch Project, we have done close to $1 million in erosion control projects on a tributary to the San Francisco River as well as forest thinning and burning.

We obtained our Forest Service grazing permits in 2008, 2009 and 2012. Each allotment was in very poor condition. Fences were down, stock tanks were filled with forest trash and silt, water distribution pipelines were in disrepair, wells were nonfunctional and there were no facilities for working cattle safely or for our employees. Feral cattle ran on the south ranch.

Things are different today. We haven't finished our building work by any stretch but we are well on our way. We have put in tens of thousands of stays to fix existing fence. We've built many miles of new fence to replace what didn't exist or couldn't be fixed. We've cleaned stock tanks. We've replaced those pipelines. We've expanded their coverage extensively. We've fixed the wells and drinkers. Professor Temple Grandin and her colleagues designed our working facilities, which are safe for cattle and the people working them. Our employees and their families have modern housing. There is an occasional feral animal that shows up. By and large, they are gone.

We don't raise cattle the way grandpa did 100 years ago. We are committed to best practices for our cattle. We routinely get and rely on input from our extension veterinarian, Dr John Wenzel, and from our extension beef cattle specialist, Dr. Marcy Ward. Both are excellent resources. We have commercial cows and registered Angus, Simmental and Sim-Angus bulls that we buy from throughout the West. During breeding seasons, we figure we need 1 bull for every 10 to 15 cows. I'm dickering on some now. Last year the price was $6,000 a head. Trich is a sexually-transmitted disease. It causes abortions. It has been a terrible, wide-spread problem in our area. We test our bulls for it annually. To date, we have been negative—a testimony to the diligence our staff shows in keeping out neighbor cattle.

We endeavor to give our cattle the best care possible. We are in country that is deficient in some minerals. Our cattle have salt and loose minerals year round. When the grass is dry, we cake and put out tubs to supplement the protein the cattle get from the dry grass. We routinely check in with our extension veterinarian for any changes in our vaccination protocols. We vaccinate the cows each spring for black leg and bovine respiratory disease, among other things. We preg test fall calving cows in the spring. We preg test spring calving cows in the fall. Last year we tested the herd for bvd, bovine viral diarrhea, which causes abortions. The results were negative. When we bought replacement heifers last year, they cost $2,500 each. Each cow has an ear tag and an electronic identification button. We use Cattle Sense for our electronic record keeping.

We are getting just under an 80 percent calf crop. That's not good enough. Given the body condition scores on our cattle when they are bred, research from the University of Nebraska indicates that we should be at 90 percent. Calves are born in the spring or in the late summer and early fall. Calves are vaccinated at branding, which happens twice a year. Each gets an ear tag with its mother's ear tag number on it. It is rare for any animal to get an antibiotic, which means we're all natural. We sell calves in the spring and fall. Spring calves average about 500 pounds. Fall calves are about 40 pounds lighter. Before they are sold, we precondition the calves for 45 days. That means they are weaned, have their vaccinations current and are trained to eat at a bunk and water at a drinker. For the past couple years, we've sold our calves to a feedlot near Dodge City, Kansas. A year ago, we sold our calves for over $300 a hundred weight. This past spring, they sold for two-thirds of that. The current market shows we'll get significantly less this fall. We are waiting for our grazing fees to follow suit.

EXPERIENCE WITH WOLVES

Since we began running stockers in 2009, we've never had a year when each animal is accounted for. From 2009 through 2011, we weren't able to account for about half a dozen head each fall when we gathered. We don't know what happened to those cattle. Did wolves, bear or lion kill them? Did they die of natural causes? Did a hunter shoot them? Did someone rustle them?

We switched from a stocker operation to a cow/calf operation in 2012. When we did, we made some significant changes from how our neighbors operate in order to accommodate the wolves. Most of our neighbors have calves born year round. There's a problem. Having baby calves in the area where the wolves are denning in the spring means we're more likely to have calf kills. The wolves go after those calves. The cows intervene. The wolf tends to kill the cow and orphan the calf. For this reason, we have elected to manage our herd to have a late summer/early fall

calving season. In the fall, the concern with wolves is still present but somewhat less because the pups are larger and elk hunters leave gut piles starting around September 1. What happens though if the fall calving cow isn't bred when we preg test in the spring? Do we wait to breed her the following fall and lose a full year or go ahead and breed her for a spring calf? We typically opt to breed them, which means we will have cows calving in the spring. Research recommendations on calving only in late summer/early fall sometimes don't seem to get that point.

We've suspected wolf kills since we switched to running cows in 2012. Each year, a certain number of cows didn't come back in at gathering time. We'd find some on the next cycle. Some we never have. Were they killed, did they die of natural causes, did hunters kill them, did someone steal them or are they still out there? We don't know and that's not for a lack of trying.

Some of our suspicions about the wolves' role in our losses were confirmed during 2015, when we had our first confirmed wolf kill. This year, 2016, has been a wreck because of our confirmed losses. We have found where wolves have attacked our spring calving cows in a two section breeding trap and in a small pasture on our north ranch. This year we know that we've lost seven cows to various causes, all but one of which we found because they were in very small pastures. The seventh cow was killed in a large pasture but near a stock tank we regularly monitor. The wolf investigators confirmed that one cow was a wolf kill and one was a probable kill. Of the other five, we think one died of natural causes, two were also wolf kills the investigators couldn't or wouldn't confirm, one was a bear kill and one was too far gone to know what killed it. We know of two calf kills; the investigators confirmed these as wolf kills.

The practical challenge we have is that we will never really know how many other wolf kills we've had. The kills we find are in our smallest pastures. You don't find them in pastures that are many thousands of acres large. By the time all the varmints are done with a carcass, we don't even find the plastic ear tag. The research results vary and individual situations differ but an estimate from USFWS—that we think is conservative—is that, for every wolf kill you find, there are at least five that you don't.

IMPACT FROM THE WOLVES

Death loss on cattle is not the only impact wolves have on us. We get lower body condition scores on our cows. That translates into reduced conceptions. We have lower weaning weights on our calves than we should. We spend many precious daylight hours moving our cattle to other pastures to avoid wolf concentrations. We also spend those precious hours monitoring for predators and looking for dead cattle. We spend time administratively dealing with the USFWS in New Mexico or the Arizona Game & Fish on reporting and compensation requests. Every kill consumes time on the ground—a couple hours to a half day—to meet with investigators and a couple hours administratively to request reports, submit reports and do followup.

There are other, perhaps less obvious impacts from the wolf. One is employee retention and safety. Some cowboys will endure threats from bears, lions, coyotes, rattlesnakes and scorpions. The wolf is different. It doesn't run away. We've had guys quit because they don't want to deal with the wolf.

The wolf has an impact on our communities, My 85-year-old friend Howard in Luna lives on the edge of the woods with his three dogs. He has seen a pack of nine wolves from the Escudilla Pack cross behind his house. His dogs would be an appetizer for that pack. They go inside. We don't want to be stalked. Does using the forest now mean that people have to carry a pistol for protection? That goes for hikers, campers, off-road enthusiasts and hunters. To the extent those people stop coming to our communities, we lose tax receipts and our businesses become even more marginal. I've asked about wolf tourism. The response I've received is that the notion is a farce.

PROBLEMS AND FRUSTRATIONS

The apparent objective of the radical environmental community is to remove man from landscape. The wolf is one mechanism they are using to do that. That is not multiple use management of our public lands.

These wolves are not the majestic animals on pet food commercials. Please look at the photos on my exhibits. Wolves are ruthless killers who are preying on our livestock.

They are costing us time and money.

Don't fool yourselves. There isn't a real compensation program in place. The current rules require Wildlife Services to confirm the wolf has killed an animal to be eligible for compensation. Dig deeper. These kills occur on pastures that are

thousands of acres large. The rancher is charged with finding the kill. He has to do so before the carcass deteriorates or is otherwise fully consumed by the wolf and other varmints. Indeed, if it is so hot that a carcass will deteriorate quickly, he's got to be on top of finding that needle in the hay stack almost immediately. If Wildlife Services does confirm the wolf kill, we have to wait for a depredation report. The one from a kill the summer of 2015 didn't show up until March 2016. Once we have the depredation report, we have to request reimbursement. We wait. Often for months. Here are real examples:

> In May of this year, we branded calves that had been born this spring. We paired them up with their mothers and gave each an ear tag that had the same number as on its mother's tag. We then branded and vaccinated the calf. We vaccinated the mother. We then took them to our Cradle Mesa Breeding Trap, a fenced in pasture of about 1,280 acres and put them with the bulls to breed them so they'll have a calf next spring. In early June, I got a call from the USFS on a Friday afternoon that a lone, male wolf number 1388 was in our area. I asked the USFS to have someone from USFWS come out and haze that wolf away from our cattle. He called back, told me he had tried but, because it was the weekend, no one was available to help. Wolves work on weekends even if government employees don't. That weekend we had a wolf kill on a cow in that pasture. Wildlife Services confirmed it. I've attached a copy of that June 4 depredation report as an exhibit. The wolf had immobilized the cow under her front legs. She went down and couldn't get up. The wolf began eating her from the rear end forward. She was still alive for part of that until she bled to death. We got a depredation report. We submitted it for payment. We got payment on that cow in early September, which was record speed. But what about that calf? It was too young to survive on grass on its own and we're not equipped with the help to bottle feed it. Do we let it die? No. Do we slit its throat? No. What's humane? We donated it to the FFA kids to raise. Is that calf an economic loss to us? Absolutely. Who is responsible for it? The wolf. Will we get compensated for it? No. I found out on Friday that we won't because the wolf only orphaned it; the wolf didn't kill it. That's what we call a stupid rule.
>
> There's more. Early that next week, on June 8, we found two more cows dead in that pasture. We called Wildlife Services. They came the next day with personnel from USFWS. They reported that these two cows had been dead for 5 to 6 months and they couldn't say what killed them. No confirmation, no compensation. We were furious. Those cows hadn't been dead for 5 to 6 months. If they had been, then they had a miraculous resurrection experience. That is, they rose from the dead, finished out their pregnancies, calved, allowed us to gather them, take them to our processing facilities, and brand and vaccinate them. What's more, we paired them up with each's calf, put the mother's tag number on the calf's ear tag and then hauled them out to that breeding trap. That's where they were when, apparently, those cows died from some unknown cause and miraculously looked like they'd been dead for 5 to 6 months. When we pointed this out, the response we got was dismissive: "Regardless of how long the cows had been dead, Wildlife Services couldn't detect the cause of death." No compensation. Not for the two cows. Not for the two calves. I'm disappointed to report that, contrary to what they told us on the ground, by the time we got the depredation reports after we'd confronted them on their proposed dates of death, they changed their estimate to say one cow had been dead for 2 weeks and the other dead for 3 weeks—not for 5 to 6 months. I've attached a copy of that report. What about lone male wolf 1388 that was in that area at that time? This is one of those genetically diverse wolves that USFWS treasures. They wouldn't pin the kills on him. The USFWS did agree to pick him up and move him to Grant County. That wasn't a perfect solution when a wolf can travel many miles a day but it was better than having him on top of us while we were now gathering the cattle out of that pasture a month early and moving them to our north ranch. The problem: USFWS called me back a couple days later to tell me that a Federal district court judge had ruled that USFWS could not release any more wolves in New Mexico until further order of the court. If USFWS couldn't release Wolf 1388 in Grant County, they weren't going to pick him up. I called them out on that. The Court's order didn't tell them they couldn't pick that wolf up. They could do that and put him in a zoo or they could adopt him out to live with people who advocate for wolves. Nothing doing. Wolf 1388 is a desirable wolf. It is genetically diverse. It mysteriously disappeared into Arizona. As far as we know, it is still killing stock. The only good thing that came of this: The USFWS stopped having a young guy call me up periodically to extol the virtues of the wolf program. Now, the senior

administrator, John Oakleaf, does the calls and he, fortunately, knows how to give me a straight answer.

There's still more. A week later, a different wolf from the Buckaloo Pack killed a cow/calf pair in that pasture on our north ranch. Wildlife Services confirmed the calf and went out on a limb to say the cow was a probable kill, which cuts any compensation in half. Please look at the photos of that kill we called in on June 20. That's what a calf looks like after a wolf gets it.

And, most recently, we know that a wolf killed one of our baby calves near Alpine, Arizona. How'd we find it? Someone was out hiking. They saw the dead calf. They took a photo and posted it to Facebook. The USFWS saw it and called us. Clint went to find it on August 22. He did. At least, all that was left—one back leg. He took the leg in to the wolf people in Alpine. They confirmed it was a wolf kill. We got that depredation report on September 14. I must say that speed on my depredation reports has improved over the past several months.

And yes, there's more. During the summer of 2015, we had a confirmed wolf kill near Alpine. The wolves killed the cow as she was calving. We lost the cow and the calf. We didn't get the depredation report until March 2016. We got payment in mid-August 2016, about a year later. That delay cost me another calf. You see, by last fall we'd have had that cow in a breeding pasture with bulls. There's an 80+ percent chance she'd have conceived. That cow would have calved late this summer and we'd have a calf to sell next spring. The delay on administering the program ended up costing me two calves, not one.

Last, there's a wolf presence program in Arizona and in New Mexico. This is compensation for wolves generally. It doesn't depend on confirmed kills. It should reflect the cost to a rancher of lower pregnancy rates and lower weight gain on our calves. Both are a reality. When wolves are running down cows, they're less likely to go into estrus or stand to be bred. When wolves are running stock, they are running body condition off the cows and they are running weight off the calves. I applied for payment in 2014. When I didn't get paid, I asked and was told the Wolf Council didn't get my applications. OK. My mistake, I didn't send them registered mail. I applied for payment before the June deadline this year. I got a call in late August that they didn't have my application. I went through my files, found the application and emailed them in. What's the problem here? Aside from no payment for 2014, there's an attitude that the rancher has unlimited time to respond to bureaucrats who can't get their paperwork straight. I called on Friday, September 16 to find out if we are getting paid this year. The answer is yes. The amount, I was told, is at the high end. It is $7,048. That doesn't come close to compensating us for a very conservative 10 percent decrease in weaned calves, which is how we compare to what we think our weaning rates should at least be. The loss of 50 calves at USFWS rates is about $53,000. The $7,048 is 13 percent of what we think our losses are. The net loss to us is $45,952.

Let me put the wolf compensation program in perspective for you. There isn't one. For just this past summer, we know that wolves have killed four cows, three on our south ranch and one on the north ranch. They've killed two calves. They've orphaned three other calves, all of whom are being raised by the FFA kids. At $2,500 a pop for a cow and $1,060 for a calf, that's a $15,300 loss to us. Of that, we qualify for payment on one and a half cows and two calves or $5,870. The net loss to us is $9,430. That's what we know about. Based on published research, we believe that for every confirmed wolf kill, there are at least five kills we never find. I'll know more about our actual experience by the end of October when we finish gathering. If it were true, however, this year alone we've lost 20 cows and 25 calves. The cost to us would be $76,500, of which we will get $5,870 back. That's a net loss of $70,630 before we include the decrease in conception rates. When we add that net loss of $45,952 in, we get a net loss of about $116,582. Who, we ask, is bearing the brunt of the cost of the wolf program on the ground? The rancher is. This is a business. Our profit is on the revenue we receive from the last calves we sell. How do you expect us to stay in business with those losses? We can't stay in business to feed wolves. Our cattle are not wolf food. The rules don't reflect reality. They don't reflect the size of our pastures. The burden of proof is completely and undeniably on the rancher. That's not a fair compensation program. If the American people want wolves on the ground, they should pay for the privilege. They aren't.

It is certainly legitimate to turn the tables and ask, as between the rancher and the wolf, what benefit does the American public receive from having ranchers on

public lands? Here are some data points: We are the ones consistently on the ground in much of this country. We have a vested interest in wise management of the resource. If the land or water fails, we don't survive. We spot forest fires and report them. We remind hunters that they can't camp next to where our cattle and wildlife go to water. Our presence is a deterrent to illegal wood cutters. Wildlife poachers don't want to be observed, so we are a threat. We are also a deterrent to the crazies who don't want to be seen in the woods. These include the people who mutilate animals—cats, dogs, and cattle. When the game and fish has a question or a concern, they call us. We are the ones who keep up the fences that have been there for decades so there can be rotational grazing. Without those fences, feral cattle become a problem, especially in riparian areas. The XXX Allotment in Arizona is a persistent example of feral cattle hammering riparian areas on an allotment that is in non-use. We enhance and maintain the water resources that wildlife use right alongside our cattle. Our cattle are not the only ones that use the salt, minerals and protein we put out. Elk, for example, are routinely at our salting grounds. Our ranch families have children who go to our local schools. We and our employees support local businesses. We produce a grass-fed, all natural product that enters the food system. Consumers around the world want that protein. Their demand will only continue to grow in the decades to come. Those are benefits from ranching on public lands. People whose intention is to use the wolf program to remove us from the landscape should consider carefully what the resource costs will be if they are successful. If the American people are truly committed to multiple use management, please stop trying to use the wolf to drive ranchers away. Give us a fair compensation system for the economic cost to us of the wolf.

RECOMMENDATIONS

1. Remove the wolves. In life we have to do cost/benefit analyses. What have we genuinely gained from the wolf program? What has it cost? The last estimate for the Mexican Gray Wolf Program is approaching $37 million. That cost is increasing at about $3 million per year. For the 97 wolves now estimated to be on the ground, that's about $30,000 per wolf per year. The cost far exceeds any benefit from them in this settled region. The program has failed. We should stop spending money on a failed program.
2. If you're not going to remove the wolves, do more than pay lip service about the rancher. We don't need a pat on the head.
   - —Get serious about compensating ranchers fairly for the cost the wolves impose. That's all the costs—direct and indirect.
   - —At the very least, give ranchers in wolf country a discount on their grazing fees. It costs us more to operate with the wolf than those who don't have varmints. We currently pay the same as everyone else.
   - —You should authorize the USFS to stream line NEPA so we can manage around the wolves. Don't make us wait years on NEPA to do the improvements we need to manage cattle around the wolves. That means fences and water projects get reviewed and authorized on an expedited basis.
   - —Allocate the money to the USFS to use to put allotments in non-use back in functional status and hold them open for ranchers to use when wolves are attacking his or her cattle.
   - —When a wolf has two confirmed kills on cattle, it has likely killed a lot more. Track the wolf down and kill it or remove it permanently from the wild.
   - —Encourage communication with ranchers so we know where the wolves are.
   - —Compensate ranchers for costs of moving cattle to unscheduled locations to avoid wolf conflicts. That's wages to gather the cattle at $125 a day per cowboy, hay most recently at about $200 per ton to feed the cattle in the holding pen during gathering and trucking at $4 a loaded mile.
   - —Tie compensation to wolf numbers in and around allotments rather than just to specific kills. Compare data from pre-wolf release predation losses to current losses and compensate accordingly. Paying a couple thousand dollars for a 10–20 percent decrease in conception rates doesn't come close for us.

3. Wolves do not fear man. Why should they? We are threatened with jail if we shoot them. Change that. Teach them to fear man and his environment to keep the wolf away from us and our livestock.
   - —Have a special permit hunting season on them.
   - —Allow private landowners to kill wolves whenever they are on private property and regardless of whether they are attacking livestock, pets or the owner.
   - —Allow anyone to shoot wolves with rubber bullets on Federal lands.
4. Things you can do to help wolves be successful but minimize their impact on man.
   - —Train wolves to eat elk by wounding elk in seasonal pastures not then in use by livestock so they can then kill and eat the animal.
   - —Provide early and timely suspected den locations so livestock can be moved away prior to whelping. Don't wait to tell us until after we move in.
   - —Allow permittees and our agents to use rubber bullets or paint guns to dissuade wolves from hanging around livestock during calving seasons.

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The documents that were submitted as supplements to Mr. Paterson's testimony are part of the hearing record and are being retained in the Committee's official files.

Mr. GOHMERT. I will recognize myself for 5 minutes for questioning. We appreciate everybody's testimony. I want to go to Mr. Guertin.

How many red wolves did the Fish and Wildlife Service originally plan to introduce into North Carolina?

Mr. GUERTIN. Twelve, Mr. Chairman.

Mr. GOHMERT. How many did they end up actually introducing?

Mr. GUERTIN. Well over 100, Mr. Chairman.

Mr. GOHMERT. Last week Fish and Wildlife announced that your captive breeding population was unsustainable at its current level. Is that your understanding?

Mr. GUERTIN. Yes, Mr. Chairman.

Mr. GOHMERT. So, by reintroducing between 132, as I understood, and 165 wolves from your captive breeding program into the wild, instead of 12, you have effectively decimated your own captive breeding program. Correct?

Mr. GUERTIN. Well, Mr. Chairman, it is a little more complicated than that. Many of the wolves that have been reintroduced into the wild have not survived. They have been hit by cars or trucks, they have been shot—

Mr. GOHMERT. Can you check your microphone, please.

Mr. GUERTIN. Mr. Chairman, just for clarification, many of the wolves that were reintroduced to the wild did not survive. They were either shot, they were killed by trucks, they died of natural causes.

So, over time, what we found out through rigorous analysis of the available science is that the seed stock we have maintained in these captive breeding programs was not adequate to ensure genetic integrity, going forward. What was announced was this vision of bringing a refocus to the red wolf recovery program by focusing on rebuilding a larger, more robust captive breeding program, and, at the same time, pulling wolves back on to Federal lands in North Carolina.

Mr. GOHMERT. Well, is it true that you plan on doubling the size of your captive breeding program?

Mr. GUERTIN. We are envisioning increasing the number of wolves in the captive breeding program up to about 400. Yes, sir.

Mr. GOHMERT. And, by the way, when I was asking about the captive breeding program being decimated, I guess that anticipated that the wolves were being killed. That is how it would——

Mr. GUERTIN. Yes, sir, I understand.

Mr. GOHMERT [continuing]. Decimate a program. Tell us what Fish and Wildlife plans to do with the red wolves once the captive breeding population is increased to over 400 wolves.

Mr. GUERTIN. Sir, over the next several years, as we work with the partner organizations throughout the country on the captive breeding program, we are also re-looking at the larger status of the species. We are looking at, over time, the potential to work with partners on additional release sites for wolves. None have been determined, no conversations have taken place yet. And we are going to manage the few remaining wolves in the wild as part of this larger metapopulation, coupling those wolves in the wild with those held in the captive breeding program.

Mr. GOHMERT. Well, I hope that you will take a moment at some point and think about how it sounds to some of us if you introduce far more wolves than you anticipated introducing, and the program ended up being a terrible failure, so you are going to double that number. It would seem to some of us that perhaps you would be better off maybe halfing or quartering that number, so that the wolves have more area in which to survive on.

Yes, sure, maybe trucks hit them, there are always going to be natural causes. But, for heaven's sake, doubling the number? It seems like you are going to ensure a double devastated program. Have you considered that possibility?

Mr. GUERTIN. Yes, sir. I understand your perception of what we are doing. What we are doing is looking at the underlying science. The underlying science has issued us a warning that the wolves held in the captive program are not enough to ensure we have the strength, at a biodiversity level and a genetic level, to fully achieve our recovery goals for——

Mr. GOHMERT. Well, isn't it possible, Mr. Guertin, that you have dramatically under-estimated the habitat size needed in order to sustain one red wolf?

Mr. GUERTIN. Yes, sir. We recognize that the original release area centered on the Dare Bombing Range and Alligator River was not large enough to sustain the larger wolf population that we envisioned, and that is one of the underpinnings for our decision to re-look at the entirety of the program.

Mr. GOHMERT. And double it.

Mr. GUERTIN. Double the number of animals in captivity.

Mr. GOHMERT. After you have learned that the habitat is much larger than you anticipated.

I see my time is expired, and I will now yield to the Ranking Member, Mrs. Dingell, for 5 minutes.

Mrs. DINGELL. Thank you, Mr. Chairman.

Mr. Bean, in his testimony, Mr. Moore claims that since Congress delisted gray wolves in Idaho, state management has

been far superior to management under the Endangered Species Act. However, the Idaho legislature has codified a shoot-first-ask-questions-later approach through its wolf depredation control fund, spending $2 million to kill wolves with no consideration of non-lethal control measures. This has led to trapping and aerial gunning of wolves on U.S. public lands, including in federally-designated wilderness areas.

Do you believe this constitutes sound wolf management?

Mr. BEAN. I believe that the state of Idaho, Representative Dingell, uses a variety of techniques in approaches to manage. And yes, it is true that every cent of that $2 million that you referred to, which is the Idaho Wolf Depredation Control Fund, must be used for killing wolves, and that none of it can, by statute, be used for nonlethal.

It is also true that in the state of Idaho many more wolves are killed by the IDFG managed hunting season by hunters with licenses and wolf tags. But many wolves are still killed in Idaho as a consequence of depredation. I believe that that number, in fact, could be substantially less if there was a greater emphasis in our state in underscoring the benefits, and certainly supporting nonlethal. If we had more nonlethal commitment, I believe that fewer wolves would need to be managed lethally by virtue of livestock depredations that would be fewer and less extreme.

Mrs. DINGELL. So, what impact do wolf killing subsidies like this—and I am going to need you to go a little faster, because I have a short period of time—and the lethal control actions of USDA's wildlife services have on taxpayers and on the development and adoption of clearly superior wolf-livestock conflict avoidance techniques like those you employ?

Mr. BEAN. Well, if you are asking what it costs to kill a wolf, that can be a matter of a few hundred to a few thousand dollars, or it can be, in one case, $30,000 for a single wolf. But not in Idaho. Seven to eleven thousand is a reasonable estimate. That is entirely borne by the taxpayer, typically, and usually the Federal taxpayer, and in some cases state.

Mrs. DINGELL. Quick, quick, could you contrast what your management is to Oregon's, please.

Mr. BEAN. Yes, Oregon's management places nonlethal in a priority position. The Oregon Department of Fish and Wildlife has on their Website the statement that lethal control will not be considered unless nonlethal is implemented first. So lethal control is on the table, but an operator that is affected by wolf depredation, to be able to get lethal control must have tried nonlethal. It is the preferred preventative management tool in Oregon, and it is said explicitly that that is the case.

Mrs. DINGELL. OK, thank you.

Dr. Vucetich, I am sorry we are running out of time, but a study released last month has been widely reported to show that red wolves are not a distinct species, but instead are some type of coyote hybrid. While hybridization with coyotes is certainly a threat to red wolf recovery, you state in your testimony that there was widespread agreement among experts that the red wolf is a listable entity under the Endangered Species Act under any plausible scenario describing its evolutionary history. Will you please

clarify for the committee why the red wolf is not a coyote hybrid, even though the two animals share common ancestry?

Dr. VUCETICH. The best way to understand the answer to that question is to introduce a piece of jargon that is known as "admixture." Admixture refers to an organism that has parts of its genome from two different species. A really interesting example of this would be that most Europeans—human beings, now—have a portion of their genome that came from Neanderthals. This does not mean that Europeans are hybrids between Neanderthals and humans.

A similar thing, an analogous thing, is likely to be the case for Mexican wolves. It is possible to have genes from more than one source and not be a hybrid.

Mrs. DINGELL. Were the FWS's efforts to reduce hybridization risks to red wolves in North Carolina effective before being discontinued?

Dr. VUCETICH. They were impressively effective. The best estimates are that less than 4 percent of the wolves in the population in the wild are hybrids, and that is more than manageable to preserve the genome of red wolves.

Mrs. DINGELL. Thank you.

Mr. GOHMERT. At this time the gentleman from Idaho, Mr. Labrador, is recognized for 5 minutes.

Mr. LABRADOR. Thank you, Mr. Chairman. First, I want to thank both of our Idaho witnesses for coming out here today to testify.

Quick question for you, Mr. Bean. I know you are an advocate for nonlethal control, but you are not opposed to lethal control of wolves, correct? Just yes or no.

Mr. BEAN. The answer is I am not opposed to lethal control.

Mr. LABRADOR. OK.

Mr. BEAN. It has to be on the table, or you will not get producers to participate.

Mr. LABRADOR. Thank you very much. As Director Moore stated in his written testimony, the population of wolves in Idaho continues to thrive under state management, far exceeding the recovery levels set by the Fish and Wildlife Service when it reintroduced them in 1995.

It is clear from our witnesses and from our attendance today that wolf management is a critical issue for people throughout our Nation; and I would like to draw the committee's attention to this photo, which was taken in 2013, after a wolf in Idaho drove 176 sheep over a cliff to their death.

[Slide]

Mr. LABRADOR. While I apologize for the disturbing nature of this photo, it is an accurate illustration of what so many people are dealing with, and why oversight of wolf management is so important.

Director Moore, Idaho is successfully managing a thriving wolf population. How many wolves are in Idaho now, and what was Fish and Wildlife's original wolf population goal?

Mr. MOORE. We have, as of this year, 786 wolves in the state of Idaho. That is our best minimum estimate. And the recovery goal was 100 wolves for the state of Idaho.

Mr. LABRADOR. What has made Idaho's wolf management so effective?

Mr. MOORE. I believe it is because we had a lot of open space and a lot of forage. Wolves are not a habitat-dependent species. They are dependent more on human tolerance and on availability of forage.

Mr. LABRADOR. OK. How does Idaho respond to cases of wolf depredation on livestock?

Mr. MOORE. As Director, I authorize those activities. When a landowner notifies us and is verified by USDA wildlife services that we have a wolf problem, we will issue a variety of control actions. Those control actions can be to the landowner or through wildlife services for either lethal take—generally it is lethal take, that is the preference of the landowner or the operator.

Mr. LABRADOR. Director Moore, in your written testimony, you describe the path to state management of a robust wolf population was tortuous, and that you are deeply disappointed that an Act of Congress was necessary to reinstate state management of wolves in Idaho and Montana.

Even though Idaho has proven without a doubt that state management of recovered species works, do you feel confident that the Federal Government will allow state management of other recovered species without a similar process?

Mr. MOORE. No, I do not. We are suffering from that with several other species right now.

Mr. LABRADOR. Do you think that we could actually handle other species in Idaho?

Mr. MOORE. Absolutely.

Mr. LABRADOR. Do you believe that Federal mismanagement of wolves is a contributing factor for higher levels of depredation in states like Wyoming?

Mr. MOORE. Yes, our information clearly shows that we have had a decline of 70 percent in depredation since delisting by the use of hunting and trapping, and that we have reduced the number of wolves killed during that same time period from 2009 to 2015 by 43 percent.

So, controlled hunting and trapping has reduced the need for further dependencies. That is not true in Wyoming, where they do not have regulated hunting.

Mr. LABRADOR. Thank you.

Mr. Bean, again, thank you for being here today. You play an active role in working with county, state, and Federal officials, as well as conservation groups and other ranchers to successfully manage wolf populations in Idaho. Correct?

Mr. BEAN. That is correct.

Mr. LABRADOR. That is what is great about state management. States have the flexibility to work with stakeholders to develop local solutions to management issues. Would you agree with that?

Mr. BEAN. Well, I think that state management and its effectiveness depends on the state management plan, and that varies state by state. States have very different implementations and perspectives on how wolves should be managed.

Mr. LABRADOR. Based on your experiences, what recommendations do you have for Congress to better facilitate recovery and management of species?

Mr. BEAN. Of the gray wolf, specifically, sir?

Mr. LABRADOR. Or in general.

Mr. BEAN. I think that the cognizant wildlife management agency operates within the framework of the ESA. As long as that framework is flexible and enables them to adjust and manage properly without interference, then they should be allowed to do that as the professionals on the ground.

Mr. LABRADOR. So you are asking for flexibility?

Mr. BEAN. I am asking for or suggesting that the act provides the flexibility that would enable the agency to do its job.

Mr. LABRADOR. And you have had some successes. How are you sharing what you have learned and what works with other ranchers?

Mr. BEAN. We have an outreach program through the Wood River Wolf Project. We have our Website up for the first time. We are adding resources to that Website that would allow people to understand what we do. I have personally participated in discussions with the fully assembled wolf advisory group in Washington State, and am often asked, including remotely, in the case of California, to discuss what we have done in terms of nonlethal wolf management in Idaho for the benefit of those that are just now coming to a realization that wolves are in their backyard.

Mr. LABRADOR. Thank you very much.

Mr. BEAN. You are welcome.

Mr. GOHMERT. Thank you. The gentleman from Arizona, Mr. Grijalva, is recognized for 5 minutes.

Mr. GRIJALVA. Thank you, Mr. Chairman.

I want to go back to you, Mr. Bean. In his written testimony, Mr. Paterson makes a number of claims and assertions. One of the troubling ones to me are the statements saying that his grazing fees should be reduced because wolves are present, and that the American people should pay for the privilege of having wolves on the ground.

To be clear, I think we need to clarify that, because the American people are already heavily subsidizing the privilege of grazing cattle on U.S. public land, and are paying millions of dollars each year to help recover threatened and endangered species like the Mexican wolf, while also paying for programs designed to protect Mr. Paterson's cattle and compensation for livestock loss. However inadequate Mr. Paterson believes it is, it is still additional taxpayer subsidy.

So, Mr. Bean, do you believe Mr. Paterson and others have a responsibility to protect their own investment as you have done, instead of relying on the government to do it for them?

Mr. BEAN. Congressman Grijalva, I believe that all livestock producers have an ethical and moral responsibility to do what they need to do to protect their animals in the wild. And remember, at least in most states, or at least states where the delisting has occurred, what you have is lethal control actions that are only legitimately possible after livestock have been killed. If you prevent the

killing in the first place, then a lot of the subsidies do not need to come in to play, and you have protected your animals.

Mr. GRIJALVA. Are you aware of any nonlethal control measures that a person such as Mr. Paterson could employ to reduce wolf predation on cattle?

Mr. BEAN. Cattle have proven to be a little bit more problematic, but a lot of advances have been made in the last 4 to 5 years, Congressman. These include range riding, and they include rewilding.

Remember that cattle in most western states lived for 80 years or more without the depredation pressure of wolves. As a consequence, they have lost a lot of their instinctive defensive behaviors in the face of this apex predator. So, what we have is a situation where we are learning the tools and techniques for cattle.

But range riding has proven very effective, and actually has a very important solidary and unanticipated benefit, which is sick animals, like calves or cows, are able to be seen and treated earlier—that death loss is prevented, death loss can go down, overall—more even range land utilization, and protected cattle. We have seen that in the Centennial Valley in Montana and in the Tom Miner Basin. So, there are existing proofs of both those assertions.

Mr. GRIJALVA. And by not leaving cattle unattended for long periods of time, is that the point?

Mr. BEAN. Well, that is certainly one of the points. If you pasture your cattle and come back in 2 weeks, well, you get what you get.

Mr. GRIJALVA. Do you believe the attitude that wolves have no value and should be eradicated is one that is compatible with the continuation of ranching on U.S. public lands in the long run?

Mr. BEAN. I do not believe that that is compatible with ranchers' best interests. I think that the attitude that the only good wolf is a dead wolf, or that wolves should be killed and that killing paid for by taxpayers on public land, including in congressionally-designated wilderness is problematic. I think it places our public grazing preferences at risk.

As I had mentioned previously, if those grazing preferences go away, then those ranching operations will fail, typically because they cannot survive on the deeded properties alone.

Mr. GRIJALVA. OK. I yield back, Mr. Chairman.

Mr. GOHMERT. Thank you. At this time the gentleman from Arkansas, Mr. Westerman, is recognized for 5 minutes.

Mr. WESTERMAN. Thank you, Mr. Chairman, and thank you to the panelists for being here today.

Director Sandoval, while the wolves in your state remain in the specific geographic area set forth for their reintroductions, they are managed as experimental populations under their own set of rules and under this 10(j) rule. However, wolves tend to move out of those areas onto private or state lands, where they are governed by the ESA.

Do you think it would be better, or more appropriate, for states to manage wolves that have wandered outside of their geographic recovery area?

Ms. SANDOVAL. Mr. Chairman, Congressman Westerman, absolutely. When you think about the burden that comes with that ESA designation as being fully endangered on that wolf, and it walks

outside of that geographical area defined by the 10(j) rule, it becomes extraordinarily problematic to be able to measure how you are going to manage that.

If the state has the ability, and we are far more flexible than the Federal Government out there, just by the fact that we operate in those areas on a daily basis. The ability for the state to be able to manage without having that ESA designation would be extraordinarily helpful for the state.

Mr. WESTERMAN. OK. Mr. Guertin, as my colleague from Michigan mentioned earlier, there is a recent study out—I believe the one that I saw was by Princeton and UCLA—that raised some serious questions about wolf genetics. I believe it actually said there is only one species of wolf, the gray wolf—and the red wolf is 25 percent gray wolf and 75 percent coyote, and the eastern wolf is 75 percent gray wolf and 25 percent coyote.

But, nonetheless, it seems that the scientific community is unable to reach a consensus as to whether a red wolf should even be regulated. And just for the record, your Agency is moving forward as if it is a listable entity. Is that correct?

Mr. GUERTIN. Yes, Congressman. We believe there is enough scientific evidence that the red wolf has been treated as and will continue to be treated as a separate species. That is based on both genetics, behavioral, taxonomic, and other criteria.

Mr. WESTERMAN. Director Myers, are releases of red wolves allowed on private property in North Carolina?

Mr. MYERS. Congressman, under the Federal rules that were promulgated by the Fish and Wildlife Service, releases were only to occur on Federal lands.

Mr. WESTERMAN. OK. And, Mr. Guertin, the red wolf recovery program required that red wolf populations be self-sustaining and contained to Federal lands. Did your Agency release wolves onto private property in North Carolina in violation of both state and Federal requirements?

Mr. GUERTIN. Yes, Congressman. Wolves were released onto private land, but they were released under the larger tenets of the Endangered Species Act.

Mr. WESTERMAN. Were there any agreements with the private landowners?

Mr. GUERTIN. Yes, Mr. Congressman. We had worked to the best of our ability with private landowners to make these releases. I believe, looking at the historical record, there were a couple of instances where that was not hammered out. It may have been talked about in concept. But going forward, we are intending to do all of these with some type of contract with private landowners.

Mr. WESTERMAN. So, do you have any written agreements that you can provide to the committee with the——

Mr. GUERTIN. Yes, Congressman. We can and we can provide similar documents in other regions in the country, where we work on endangered species restoration and recovery efforts for species including black-footed ferret or other——

Mr. WESTERMAN. Can you do that in North Carolina?

Mr. GUERTIN. Yes, we can.

Mr. WESTERMAN. All right.

Director Myers, what is the general attitude about wolves in North Carolina, particularly in regards to wolves on private property?

Mr. MYERS. Congressman, it is hard to characterize the general attitude. I will say that, given the removal of opportunities for landowners in the reintroduction area to address concerns with coyotes on their property, the attitude toward the red wolf program has diminished significantly.

Mr. WESTERMAN. I believe there was a program that was tried in Tennessee that failed back in the 1990s. This program in North Carolina does not seem to be too successful.

So, Mr. Guertin, what makes the Service confident that other red wolf introductions will be successful throughout the region between Texas, Pennsylvania, and the Atlantic?

Mr. GUERTIN. Congressman, we have learned a lot the last few years, both with the red wolf recovery program and our experiences particularly with the gray wolf on how to have a successful reintroduction and recovery program.

The vision, going forward for the red wolf, is to first cement our seed stock by focusing on genetic integrity of animals in both the captive population maintained by a number of institutions, as well as some interchange with the wild population remaining on the Federal estate there. Second, doing a 5-year review to make sure we are track. Third, exploring the possibility for additional release sites with willing partners. There have been no conversations, other than a concept at this point. And fourth, building on some of the hard lessons learned in other regions of the country.

I, before coming back here to Washington, served as regional director for our Mountain Prairie Region, and was intimately involved in our ongoing efforts for recovery with wolves in Montana, Idaho, and Wyoming, including leading our team to write those delisting rules so we could move management of the species to state control. We want to take those type of lessons learned and apply those, as well, to the red wolf recovery program.

Mr. LABRADOR [presiding]. The gentleman's time is expired, and the gentleman from Virginia.

Mr. BEYER. Thank you, Mr. Chairman. I would like to just begin by trying to create a sense of context and proportion. I don't want to minimize Mr. Paterson's experience in New Mexico or Arizona, but to make the case that wolves do have an insignificant impact on the cattle industry in the United States. In the eight states with gray wolves, less than 1 percent, or nine-tenths of 1 percent, of the cattle deaths are from wolves.

In contrast, 8 percent are from weather, 74 percent from other health issues. Last year, we slaughtered almost 29 million cattle in the United States, and gray wolves killed 6,777. Basically, we slaughter 5,000 cows for every 1 that is killed by a gray wolf. I just think it is very important to put this overall in proportion.

And there are multiple programs for reimbursement: the 2009 Omnibus Public Lands and Management Act, the Mexican Wolf Introduction Trust Fund, and the Livestock Indemnity Program. As Mr. Paterson suggests, perhaps those programs could be improved if you are only getting reimbursed for nine—what was it, four calves and five cows—when perhaps you had $116,000 worth of

losses? But clearly, this Congress again and again has said that they are willing to pay for depredation losses in order to have a balanced approach to our natural resources.

Let me just look at Wyoming in 2015—134 livestock were killed last year by wolves: 72 cattle, 62 sheep. The average reimbursement was $2,500. In contrast, there were 77 wolves killed by predation. So we actually killed more wolves than wolves killed cattle last year.

Let me move on. Mr. Guertin, the recent population viability analysis shows that there is less than a 1 percent chance of extinction of the captive red wolves based on the current population over the next 100 years, but 100 percent possibility of extinction of those red wolves living in the wild.

So, why have you chosen to focus on the captive wolf population, while ignoring the larger wild wolf population? In the statistics I show, there are only 29 known wild red wolves right now. Doesn't the population viability analysis show that forcing them to live on only the Alligator River National Wildlife Refuge, as proposed by Fish and Wildlife, will ultimately result in the extinction?

Mr. GUERTIN. Congressman, that is a very astute observation. There are very few wild red wolves on the landscape right now in North Carolina. At the same time, the science is clearly showing us that there are not enough wolves in the captive breeding program to ensure species survival, going forward. The health of the species is at risk.

We have made a policy choice to focus on rebuilding that seed stock via the captive program using zoos, aquaria, and other partners throughout the country. We believe firmly in ongoing restoration recovery of the wolf in the wild, and will manage both the remaining wolves in the wild and those in the captive breeding program with selective interchange and replacement to keep the behavioral characteristics we are looking for intact in the species.

We are coupling this with a larger strategy, a larger vision, to look at potential areas to rebuild wolves in the wild, but we come back to the underlying science, which points to us the peril the species is in and the aggressive intercession we need to make to ensure viability, going forward.

Mr. BEYER. Thank you, Mr. Guertin. My friend, Mr. Labrador, put up a slide of the sheep run off the edge of the cliff. I think it was 136.

Dr. Vucetich, you had written and thought a lot about making the argument that wolves don't kill for fun, they kill for food. How do you reconcile—and I know you have written about that—your perspective with the picture?

Dr. VUCETICH. Well, a wolf is able to live to be about 10 or 12 years of age, but most wolves are dead by age 4. This is even true under normal circumstances. The most common causes of death are starvation and fighting with other wolves over food. This is the case when humans are not involved with killing them. The point of those statistics is that getting food is extremely difficult for wolves. They are always trying as hard as they can to get food. And when they do so, they are lucky to make it about to half or a third of their life span. So wolves are programmed to essentially try hard.

Then what happens on occasion, occasions like this, wolves run into a situation where food is much easier to get than other circumstances. They follow their instincts, and then, of course, unfortunate incidences like this occur. That is the biology behind it, sir.

Mr. BEYER. So this is still survival of the species, rather than killing for fun?

Dr. VUCETICH. One hundred percent correct, yes.

Mr. BEYER. Great. Mr. Chair, I yield back.

Mr. GOHMERT. Thank you. We are honored to have with us the Senator from North Carolina.

Senator Tillis, you are recognized for 5 minutes.

Senator TILLIS. Thank you, Mr. Chairman, Ranking Member, for having this hearing and allowing me to participate.

Mr. Myers, it is good to see you. It was good to work with you when I was Speaker of the House and the Wildlife Resources Commission of North Carolina. In less than a minute, can you describe the red wolf program and the captive breeding program, your perspective, your assessment of it?

Mr. MYERS. Thank you, Senator. Mr. Guertin just spoke of the peril that the red wolf faces. Forty years ago, that peril was the coyote. Today, that peril is again the coyote. And the Service's recommendation to maintain a small population of intensively managed red wolves on Federal lands in Dare County is simply inconsistent with their newly prioritized captive breeding population objectives.

Today, 30 years after the first reintroductions, and despite intensive management practice, and very intensive management practices of tubal ligations and vasectomies to coyotes, releases of more than 165 animals, 58 in Dare County alone, there is only one known wolf pack that currently occupies Federal lands.

Meanwhile, in the 10-year period from 2002 to 2012, the reported numbers of coyotes trapped across our state has increased 2,600 percent. I point that out because much of the information relative to the success of the adaptive strategy of sterilizing coyotes, a lot of that data dates back prior to this escalation and proliferation of coyotes. So, you can just imagine the intensity and the intensive effort that would be required to continue that practice to avoid the threat of hybridization.

Senator TILLIS. Mr. Myers, didn't you mention—I am sorry, just in the interest of time, they are a lot more strict over here than they are in the Senate, so I am going to keep tight on my time—I met with you earlier today and met your lovely wife in my office. Did you say that there are 30,000 takings of coyotes in North Carolina a year?

Mr. MYERS. Our current hunter harvest estimate ranges between 25,000 and 35,000 per year.

Senator TILLIS. I am not a specialist in this wildlife management, but I know a little bit about math. So, it probably means that we have a lot of coyotes in North Carolina, a lot of coyotes out in Dare County, a lot of coyotes out in the counties where these species were released before. How on earth can you ever overcome those numbers and think that the agency has a credible strategy to prevent hybridization?

Mr. MYERS. Senator, I do not believe there is a strategy that avoids this conservation reliance. I think it is a self-sustaining component. I do not think it can be achieved——

Senator TILLIS. It is a numbers issue. I would love to see a thriving red wolf population, I just don't see how you accomplish it, given the challenges that we have.

Mr. Chair, I have some statements from various farmers and landowners if I may submit for the record.

Mr. GOHMERT [presiding]. Without objection.

Senator TILLIS. And I would love to ask questions of Mr. Guertin. I will follow up with you.

But one thing I would urge this committee to look at is the failure of this program. The fact of the matter is, even by their own estimate, a report that was issued in September of this year says it is a failure. This comes from the Fish and Wildlife Service.

The Office of the Inspector General back in February of this year said that it was a failure. They said that they did not follow their own rules. They released wolves well beyond the number that they were supposed to, some on private lands.

I would love to find a credible way to sustain a wild population of red wolves; but I have to say that this agency has no credibility, based on the lack of respect that they have had for the landowners, the numbers that are pretty compelling, and an independent report by the Office of the Inspector General.

And now we are talking about a cessation of the program, and relocating some of these breeding pairs to Dare County out of the five-county area that they are today. Are we going to do some sort of orientation to make sure that they stay on the Federal lands there? What is the likelihood some of those are going to try and migrate back to where they came?

And we have studied that. I know that Mr. Myers has studied that. They have proven that if you catch them and put them in one area, they try to get back. We discussed an example of a wolf and coyote in my office today. So there does not seem to be any credible basis for doing what we are talking about doing.

And it is odd to me, because we are talking about moving the pairs, but then we are talking about increasing the number. How is that a ramping down of the program?

It seems to me that there should be a reset to figure out an appropriate way to do it, to make sure that the captive breeding population program is able to sustain the species. But before we do anything more in North Carolina, I think it makes more sense to shut it down, figure out how to do something right, build some credibility with the landowners, the property owners, and the other people that—quite honestly, there is a pretty long history of less-than-respectful dialogue between the folks at least in North Carolina—I won't speak for the other regions that may have concerns—and the Fish and Wildlife Service.

This is going to be something our office is going to stay focused on for as long as I am a U.S. Senator, and that is at least another 4 years. We will reach out to your office and speak more, but we have to get this program that has zero credibility under control.

Mr. GUERTIN. May I respond to the Senator, Mr. Chairman?

Mr. GOHMERT. Yes.

Mr. GUERTIN. Senator, thank you for your offer, and we would be honored to come up and sit down with you and your key staff to discuss this further. Thank you.

Mr. GOHMERT. All right, thank you.

And Senator, we have been honored to have you here.

The Chair recognizes the gentleman from Michigan, Mr. Benishek, for 5 minutes.

Dr. BENISHEK. Thank you, Mr. Chairman. Thank you for allowing me to participate here.

I have to, unfortunately, contradict my colleague from Michigan, Mrs. Dingell, in that, in your opening statement, you mentioned that hunting deer in Michigan has not suffered under the wolf. That is not really the case in my district. You know, there has been a dramatic drop in the deer population and in the hunting results, as well. As a matter of fact, they canceled the doe permits in my district last year.

I want to ask Mr. Guertin a couple questions.

How would you categorize the status of the gray wolf population in the Western Great Lakes Region right now?

Mr. GUERTIN. The Fish and Wildlife Service's view of the population of wolves in the Western Great Lakes is that they are recovered, Congressman. There are over 3,600 wild animals in the three states, and we wrote a rule to delist those animals, remove Endangered Species Act protection, and return management to the state. That rule was overturned on judicial review. The Department of Justice is appealing that overturning in a hearing that is set to begin oral arguments in——

Dr. BENISHEK. What was the number you used, 3,600? Is that what you said?

Mr. GUERTIN. Yes, Congressman.

Dr. BENISHEK. OK.

Mr. GUERTIN. In the three states.

Dr. BENISHEK. In the opinion of the Fish and Wildlife Service, what is the impact of the continued Federal management of the gray wolf population in the Western Great Lakes Region, both on the wolf population itself and the great ecosystem?

Mr. GUERTIN. Do you mean the biological impact?

Dr. BENISHEK. Not being able to manage the wolves.

Mr. GUERTIN. Well, under the Endangered Species Act protections, the Federal agencies ourselves are the primary jurisdictional agency to manage all issues arising, whether it is recovery actions or whether it is depredation issues. We build a strong rapport and working relationship with the state fishing agencies at the same time. We have worked with them in partnership over the last year. Over 200 wolves were removed from that population for depredation-related issues that were authorized under their status.

Dr. BENISHEK. All right.

Now, Dr. Vucetich—is that how you say it, Vucetich?

Dr. VUCETICH. Vucetich.

Dr. BENISHEK. Vucetich, OK. Well, welcome. Michigan Tech, of course, is in my district, and I have visited many times, so it is a pleasure to see you. And I am happy to hear of your expertise with the wolf.

Can you give me an estimate of the impacts of the gray wolves and the population, the deer population in the Upper Peninsula?

Dr. VUCETICH. Yes, it has not been demonstrated that wolves are negatively impacting deer in the Upper Peninsula of Michigan.

Dr. BENISHEK. Well, I have to tell you that that sort of differs from my experience. I have a place in the Ottawa National Forest. I am sure you are very familiar with that. And, maybe not everywhere in Michigan, but in the Western and Upper Peninsula in Michigan, there are no deer left. Like I said to Ms. Dingell, they canceled the doe season last year because there are no deer.

And that is a problem. I get this from my constituents, OK? It is not like I am making this stuff up, because I have people coming to me, complaining about the fact that there is nothing to hunt.

Well, let me just go on a little bit. I want to talk about this lawsuit a little bit. You talked about—what is it, a DPS—I cannot quite remember the term there, population——

Dr. VUCETICH. Distinct population segment.

Dr. BENISHEK. Yes, yes, the distinct population segment, and that one of the bases of the court decision was that, since the gray wolf has not returned to its entire habitat, that that is one of the bases of overturning the decision to delist the wolf. Is that my understanding of——

Dr. VUCETICH. No, I don't think that is a fair description of what the judge's decision was; and the judge's decision was complicated. But, in a nutshell, what I believe that is related to is a requirement by the Endangered Species Act which suggests—not in legal terms, but in laymen's terms—that a species needs to be well distributed throughout its former range.

Dr. BENISHEK. Well, see, that part I don't understand. Because, for example, the city of Detroit and Wayne County was the former wolf range. So, we are not going to treat it as recovered if Wayne County is no longer populated with wolves?

I don't understand what you are going to use as the new range that the wolf is there. I mean there are lots of wolves in the Upper Peninsula, I will tell you that.

Dr. VUCETICH. No, there is no requirement, and no one has ever suggested that there is a requirement for a species to occupy all of its former range. That has never been suggested by anyone who studies the problem.

But what is clear from congressional intent and from a series of judicial decisions, is that it seems that a species needs to be—and again, some of these things are difficult, because they have not been sorted out adequately, and so I know I am using the term loosely—but well distributed throughout its former range.

If we can refer to what the law says, what the law says is that if a species is at risk of extinction throughout all or a significant portion of its range, that is the definition of endangered, and you are not recovered until you no longer fit that definition.

Dr. BENISHEK. I am out of time, but I would enjoy talking to you more about this issue, so thank you.

Mr. GOHMERT. Thank you. The gentleman from New Mexico, Mr. Pearce, is recognized for 5 minutes.

Mr. PEARCE. Thank you, Mr. Chairman. I appreciate the testimony from each one of you here today. I have several documents here I will submit for the record as we go through.

But first, we have had, through my 12 years of service, continual references from local ranchers and local elected officials as to the misconduct of the Fish and Wildlife Service regarding the Mexican gray wolf program. So, 3 years ago we asked for an IG report. That IG report came back earlier this year. I would like to submit that IG report fully for the record.

Mr. GOHMERT. Without objection.

Mr. PEARCE. It is fairly complex, and so our office took the liberty of breaking out the major, major problems that were identified by that. So, in numerous instances, the IG finds where the Fish and Wildlife Service is falsifying information. They falsified about a wolf bite. That is critical, because you have to euthanize the wolf when it bites.

They have falsified the location of wolf kills, they have falsified reports over a dozen times. That is page 11 of the report. They have falsified the wolf attributed to the kill, because you have to euthanize wolves after a certain number of kills. And if they change which wolf killed it, then they do not have to euthanize the genetically pure wolves.

The IG report contains numerous instances of lies. The Fish and Wildlife Service lied in a press release about the wolf biting a volunteer. The employee lied directly to the IG. That was on page 5. They lied about the wolf not being a nuisance. Then the IG found many instances of mismanagement: first of all, they hired someone incompetent to head the IFT team, a team member states to the IG that the former IFT coordinator was unprepared to assume the coordinator role and that that team leader could not even correctly identify which wolf breed they were working with. He didn't know the differences between the Alaskan wolf and the Mexican gray wolf; poor communications with the public; never met with county employees; and then, the fourth major area—so, again, we have identified in the IG report falsification, lies, mismanagement—and then the final major area of finding was the manipulation of scientific data. The employee admitted to manipulating data, a former IFT coordinator. Denied consciously manipulating it, and then later admitted that, well, maybe she did treat those wolves just a little bit differently than other wolves, if they are genetically pure.

She also refused to fill out the required nuisance reports, and encouraged other Federal employees not to fill out these nuisance reports. I would like to submit for the record this kind of general breakdown. So, if I could submit that for the record, thank you.

Mr. GOHMERT. Without objection.

Mr. PEARCE. I also have an email from Alan May—he works with APHIS and he is talking about trying to get him to alter his report, or trying to get Mike to alter his report. He finds that very disturbing. That was a practice that continued and was never brought into check.

The next thing that I have, the person who was on the initial wolf recovery program, a Roy McBride, raises questions, even to the genetic purity. And I would like to submit that letter for the record.

Mr. GOHMERT. Without objection.

Mr. PEARCE. Also, Mr. Chairman, if I could, one of the outcomes of today's hearing, we asked the IG to report to us on the genetic purity of the strain, because there are significant findings that indicate maybe there is not a pure strain at all, and maybe we are just practicing something we can never get to.

So, if I could request that you all consider asking the IG to do that, and then also go ahead and figure out the answer to the depredations and reimbursement issues that we have heard, both sides of the issue today; if the committee could do that. If you don't find that to be useful, then we will submit that request again.

And just to kind of put things into context, I have a document by Jack Woody, U.S. Fish and Wildlife Service. He was on the March 1986 program, and he is talking about how the founding female of the ASDM-GR line was said to have been captured as a pup near Sonora, Mexico in 1961. She was donated to the ASDM by tourists passing through Tucson, Arizona on a motorcycle trip. The tourist was concerned the pup would not survive the motorcycle journey. So, when you go all the way back to the beginning, we have a dadgum motorcyclist going through Tucson, carrying a wolf—I mean this stuff is—yet we are supposed to believe the science and all of this validity and verifications?

I would yield back the balance of my time, Mr. Chairman.

Mr. GOHMERT. At this time the Chair recognizes the gentleman from California, Mr. LaMalfa, for 5 minutes.

Mr. LAMALFA. Thank you, Mr. Chairman. Of course, this is a very important issue, as I represent the very northern part of California, where wolves are being introduced or pushed into the state now. I find it fascinating that the comfort level with which urban legislators can just dismiss what the impact is when they don't have to worry about them in their backyard, in their parks, or they don't have to put their kids in a cage at a bus stop in order for them to be protected while the bus comes—OK? This is a fascinating attitude to me.

Earlier, we heard about the depredation happening in the cattle industry being not a big deal, because it is only 1.5 percent. If you have a million head of cattle that is consumed per year, and you lose 6,000 of them—I wonder what General Motors would think of that, if they produced a million cars per year and somebody stole 6,000 off the end of the line. Or let's say for a politician in a tight district, what if 6,000 votes were filched away from their election? I think it would get people's attention. It certainly does the rancher who has the losses on that.

Director Guertin, in 2009, the U.S. Fish and Wildlife Service acted in order to remove the gray wolf from the endangered species list. The lawsuits from extremist groups continued to keep the wolf on the list, because the Service evidently does not want to make a move on it.

Despite all contrary data, this is essentially providing guidance to state agencies, such as California, who has moved to list it in California, and now that the wolf is being introduced to the states, or pushed down from Oregon, et cetera. So, we are just leading the states astray on something that the Service has already provided for to be removed from the list, kind of what we are dealing with

in California. The Valley elderberry great-horned beetle should have been delisted, as recommended, years ago, and we cannot do levee projects because there might be elderberries in the habitat. They have been fooling with that for 8 or 9 years. It is a very frustrating process that we hear delisting, and then it does not happen.

So, if they have already reached the population goals set by the Service—I heard over 5,500 wolves in the Upper Midwest—what criteria will they eventually rely upon to say they do not need to be on this list any more?

Mr. GUERTIN. Congressman, the Northern Rocky Mountain Wolf population is about 1,800, 1,900 animals, largely in Montana——

Mr. LAMALFA. Is it a gray wolf?

Mr. GUERTIN. Yes, those are the gray wolf. Of those animals, two of the states manage them now under state control, because they were delisted by the U.S. Fish and Wildlife Service. That also included the eastern third of Oregon and Washington. Wyoming was subsequently delisted by the Fish and Wildlife Service. That delisting was overturned by a court, but we actually have oral arguments to appeal that Friday.

Mr. LAMALFA. Why is it a state-by-state listing? We have a gray wolf, we have 6,000 of them in North America. Why do they have to be distributed through every state, otherwise it is delisted state by state?

Mr. GUERTIN. These animals that are starting to show up in Northern California came from the Northern Rocky Mountain population. There are now—probably six or seven have been documented in the state of California.

Mr. LAMALFA. Approximately seven.

Mr. GUERTIN. They are an endangered species at this point. We are working proactively——

Mr. LAMALFA. But they are not endangered if they are across the line and—a couple lines in Colorado or something.

Mr. GUERTIN. They would be endangered in Colorado——

Mr. LAMALFA. OK, whatever state you listed, we don't have time for, they would not be endangered in the other state, but they happen to travel, so it is endangered in California.

Mr. GUERTIN. Congressman, what I would also state for the record is we have proposed to delist gray wolves in the remainder of the Lower 48, except for the Mexican gray wolf subspecies. That was also overturned by a court. Our hope is that we get a favorable outcome for these two legal cases in Western Great Lakes and in Wyoming——

Mr. LAMALFA. So, we may have some project down in the Southwest, but we can still anticipate California will continue to have an endangered status?

Mr. GUERTIN. No, Congressman. We anticipate, if we are successful in getting a Federal court to delist the wolf in Wyoming and delist it in the Upper Midwest, we would then proceed with a rulemaking to delist the wolf in California and the rest of the Lower 48.

Mr. LAMALFA. All right. Thank you for that.

Mr. Moore, I am going to run out of time here again. Quickly, in California right now there is zero compensation for the takings of wildlife. They don't even want to admit when it is one. Like they

had a calf killed in, I think in Siskiyou County, where there were five wolves eating on it, but they were not sure that it actually could be attributed to wolves.

How would you say the compensation should work in California versus Idaho?

Mr. MOORE. Idaho has only a small portion of Federal money left for compensation. It is the only game species that does not get compensated for depredations in the state of Idaho with sportsmen's money.

Mr. LAMALFA. Well, they do have a depredation process through controlling——

Mr. MOORE. Yes, they do. It goes through the Governor's Office of Species Conservation.

Mr. LAMALFA. OK. Thank you, Mr. Chairman.

Mr. GOHMERT. Thank you. At this time the Chair recognizes the Ranking Member for closing comments.

Mrs. DINGELL. I know we are at the end of time, and we can all tell that this is an emotional, complicated issue that we have to keep talking about. I, alone, am not an expert like any of you—-responding to my Michigan colleague—and have already found that data that says the doe hunt was not canceled because of wolves. But severe winters take a toll on deer because of the increased rate of starvation, and that was why the hunt was—so, Mr. Chairman, I would like—and there is another article about coyotes, not wolves, that we could put for the record to respond.

Mr. GOHMERT. Without objection.

Mrs. DINGELL. And other people who have questions could do so, as well. Thank you.

Mr. GOHMERT. OK. Without objection, it will be so ordered.

As we have heard today, management of wolves is a critical concern for citizens of a large portion of our Nation. It is appropriate, given our oversight role, that we ensure that the Federal Government is managing wolves responsibly and effectively. To do so, the Service must follow the law and its own rules. It must hold employees accountable for misconduct. It must take responsibility for its failing efforts, rather than expanding them without any reasonable expectation of a different result. It must work with the states, citizens, and other stakeholders in wolf recovery planning and efforts.

States are, by far, the best situated and equipped entities to manage wildlife within their borders. Our intent has always been clear in this regard: management responsibilities for recovered species must be transferred to the states at the earliest possible juncture. Such management ensures the best outcome for the species and the stakeholders, and it is inexcusable when continuous costly litigation is used to undermine a process Congress clearly spelled out.

At this time, we do thank you for your attendance. We know it is a great hassle. You have been very patient with us, and we appreciate your expertise and your experiences. They are part of the record that will be around as long as there is a United States of America. And that will enable us to take those comments, take your observations, and look further.

Members of our committee and our distinguished guests may have some additional questions for the witnesses, and we will ask

you respond to those in writing. Under Committee Rule 4(h), the hearing record will be held open for an additional 10 business days for these responses, should there be such questions.

If there is no other business at this time, without objection, the committee stands adjourned.

[Whereupon, at 5:00 p.m., the subcommittee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

ASSOCIATION OF FISH & WILDLIFE AGENCIES,
WASHINGTON, DC

September 27, 2016

Hon. LOUIE GOHMERT, *Chairman*,
Hon. DEBBIE DINGELL, *Ranking Member*,
House Subcommittee on Oversight and Investigations,
1324 Longworth House Office Building,
Washington, DC 20515.

Dear Chairman Gohmert and Congresswoman Dingell:

On behalf of the Association of Fish and Wildlife Agencies (Association), I submit this letter for the record of the Subcommittee hearing of September 21, 2016, on "Federal Government Management of Wolves." Founded in 1902, the Association's mission is to support and advocate for state, provincial, and territorial authority for fish and wildlife conservation and to assist those agencies in promoting science-based resource management in collaboration with public and private partners. In satisfying our mission, we cooperate closely with federal agencies, conservation NGOs, our fish and wildlife constituency, and the general public. All 50 state fish and wildlife agencies are members of the Association.

The Association strongly supports the testimony presented at the Subcommittee hearing on September 21, 2016, by Director Virgil Moore, Idaho Department of Fish and Game; Director Gordon Myers, North Carolina Wildlife Resources Commission; and Director Alexandra Sandoval, New Mexico Department of Game and Fish. Their written statements detail with great clarity the role of the states in recovering wolf populations and the states' successes in sustainably managing wolf populations to the benefit of all of their citizens.

Gray wolf populations far exceed established federal recovery goals for the Rocky Mountain West and the Great Lakes States. The U.S. Fish and Wildlife Service (USFWS) has repeatedly attempted to delist the gray wolf in WY, MI, MN, and WI, but has been thwarted by ill-advised court decisions. The Association commends and supports the USFWS decisions to de-list those wolf populations and the Association supports Congressional action to direct such an outcome for those states (in keeping with like action by Congress in 2011 for wolves in Montana and Idaho). Indeed, Idaho and Montana have demonstrated that once wolf populations are delisted, science-based, state-led wolf management can achieve sustainable wolf populations where depredation on livestock is reduced, rebalance the predator-prey relationship between wolves and large ungulates, provide sustainable recreational opportunities for hunting and wolf watching, and diminish public anxiety about the recovery of large predators.

The Mexican wolf is on the periphery of its range in the southwestern United States. The majority of Mexican wolf historic habitat is located in Mexico, and the species therefore cannot be biologically recovered only in the southwestern United States. The states of New Mexico and Arizona, working in cooperation with the USFWS, are assisting Mexico in assessing habitat suitability and recovery success probabilities of its Mexican wolf population. The Association supports this cooperative state-federal-international collaboration, for an agreed-to population recovery goal, so that once achieved, delisting can occur.

The genetics of the red wolf, currently found only within a nonessential experimental population in North Carolina, substantiate that the "species" is now hybridized with coyotes and feral dogs. This hybridization will continue to occur due to the high coyote population in the state, and it is not feasible to sustainably prevent further hybridization of free-ranging red wolves across the landscape, further diluting red wolf genetics. Coyote populations exist throughout the historic range of

the red wolf, and any reintroduction of captive-bred red wolves will quickly hybridize with coyotes. This hybridization factor and the diverse generic character of the red wolf raises serious questions about whether it is a listable entity under The Endangered Species Act (ESA), particularly given the 1983 legal opinion from the Department of Interior's Solicitor's Office regarding listing of hybrids. The USFWS should resolve these questions regarding genetics and hybridization and delist the red wolf if hybridization is indeed confirmed.

Wolf management, like that for any large predator in this country, is complicated, challenging, and controversial. We appreciate the role of the USFWS in the discharge of its obligations under the federal ESA, and we acknowledge the concurrent management or conservation authority for federally listed species by state fish and wildlife agencies. Even though the complexities of wolf recovery and management test the limits of collaboration, we know that both federal and state agencies want to achieve the best possible conservation outcomes for wolves. That being said, we look forward to a robust discussion about future improvements or reform to the federal ESA in which the interests, roles, and responsibilities of state fish and wildlife agencies are more clearly recognized.

Thank you for the opportunity to provide this letter for the hearing record.

Sincerely,

NICK WILEY,
President.

[LIST OF DOCUMENTS SUBMITTED FOR THE RECORD RETAINED IN THE COMMITTEE'S OFFICIAL FILES]

—Letter addressed to Chairman Gohmert and Ranking Member Dingell with attached documents for the hearing record submitted by the Southern Environmental Law Center dated October 4, 2016.

—Memorandum in Support of Preliminary Injunction, ECF No. 32, *Red Wolf Coal. v. U.S. Fish & Wildlife Serv.*, No. 2:15-cv-00042-BO (E.D.N.C. June 20, 2016). Submitted by the Southern Environmental Law Center.

—Reply in Support of Preliminary Injunction, ECF No. 45, *Red Wolf Coal. v. U.S. Fish & Wildlife Serv.*, No. 2:15-cv-00042-BO (E.D.N.C. July 22, 2016). Submitted by the Southern Environmental Law Center.

—Order, ECF No. 63, *Red Wolf Coal. v. U.S. Fish & Wildlife Serv.*, No. 2:15-cv-00042-BO (E.D.N.C. Sept. 28, 2016). Submitted by the Southern Environmental Law Center.

—Heather Clarkson, Defenders of Wildlife, Op-Ed, Poor FWS Decision Dooms North Carolina's Red Wolves, *News & Observer*, Sept. 20, 2016. Submitted by the Southern Environmental Law Center.

—Editorial Board, Save the Red Wolf, *News & Observer*, Aug. 31, 2016. Submitted by the Southern Environmental Law Center.

—Editorial Board, Our View: Keep the Red Wolf Alive—Somewhere, Somehow, *Fayetteville Observer*, Oct. 23, 2014. Submitted by the Southern Environmental Law Center.

—Editorial Board, A Federal Judge Acts Wisely to End Killings of Red Wolves, *News & Observer*, May 15, 2014. Submitted by the Southern Environmental Law Center.

—Editorial Board, Protecting Red Wolves: Rebounding Breed Should Not Be Collateral Damage, *Winston-Salem Journal*, Feb. 16, 2014. Submitted by the Southern Environmental Law Center.

—Editorial Board, Our View: Endangered Wolves Need a Judge's Intervention, *Fayetteville Observer*, Feb. 12, 2014. Submitted by the Southern Environmental Law Center.

—Editorial Board, Deadly—Keep Red Wolves Out of Coyote Hunters' Sights, *Fayetteville Observer*, Nov. 29, 2012. Submitted by the Southern Environmental Law Center.

—Editorial Board, Fix this—Don't Blind Coyotes in the Red Wolf's Territory, *Fayetteville Observer*, Oct. 26, 2012. Submitted by the Southern Environmental Law Center.

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—Dr. Ron Sutherland, "Study Indicates Wildlife is Thriving in Red Wolf Recovery Area." Wildlands Network. Photos of wildlife taken from planted cameras. 2016.

—Letter addressed to Chairman Gohmert and Ranking Member Dingell from multiple groups regarding the oversight hearing in support of state management of wolves dated September 29, 2016.

—Letters and emails from constituents of Representative Pearce expressing discontent with Federal mismanagement of the Mexican Wolf population. Emails dated October 4, 2016 and October 5, 2016.

—Emails documenting correspondence between Fish and Wildlife officials assessing to determine the killing of a calf as either by a wolf or a coyote. Correspondence occurs between May 21, 2016 and May 23, 2016.

—Report issued to Representative Pearce from the Department of the Interior's Office of the Inspector General regarding the Mexican wolf program itself and specific allegations of misconduct by a former Field Coordinator dated June 29, 2016.

—Letter addressed to Representative Pearce from Director of the U.S. Fish and Wildlife Service, Dan Ashe, regarding follow-up to the OIG report on the Mexican Wolf program dated September 2, 2016.

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—Testimony of Mr. Jett Ferebee in response to the oversight hearing specifically regarding his dissatisfaction with the U.S. Fish and Wildlife Service's Red Wolf Recovery Program.

—List of Farms and Areas (and Counties) involved in the Red Wolf Recovery Project.

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